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TRANSPARENT TEMPLATES OF PRINCIPALS

by

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ABSTRACT

This exploration of the personal constructs of principals was intended to reveal the transparent templates they create and attempt to fit over the realities of their world. This study sought to go beyond externally imposed descriptions of the leadership behavior of principals by exploring their personal constructs to discover the meaning that principals ascribe to their leadership behavior in anticipation and interpretation of events. Kelly's (1955) personal construct theory provided the conceptual framework for this study. The research questions were addressed through qualitative inquiry. Data were collected in a process that began with full context elicitation, laddering, and triadic analysis, and proceeded to full grid quantitative analysis. Findings from this study may increase the awareness level in the professional community of the meaning that principals ascribe to their leadership behavior. It was recommended that results from this study lead to the development of a process that can be implemented in principal leadership preparation and professional development programs to develop more self-aware, productive, and effective principals (Petri, Lindauer, & Tountasakis, 2000).

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TABLE OF CONTENTS

LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER ONE: INTRODUCTION.....	1
Problem Statement	4
Purpose of the Study	5
Definition of Terms.....	5
Conceptual Framework: Personal Construct Theory	6
Methods.....	7
Participants.....	7
Assumptions.....	8
Instruments.....	8
Data Collection	9
Data Analysis	11
Limitations and Delimitations.....	12
Significance of the Study	12
Justification for the Research.....	13
Organization of the Study	14
CHAPTER TWO: REVIEW OF RELATED LITERATURE AND RESEARCH.....	16
Externally Imposed Descriptions and Expectations of the Leadership Behavior of Principals.....	18
Contemporary Leadership Theories.....	21
Trait Theory	21
Contingency Theory.....	22
Exchange Theory	23
Transactional Theory	23
Transformational Theory	24
Cognitive Approaches.....	24
State Entities	25
National Entities.....	28
Internally Imposed Descriptions and Expectations of the Leadership Behavior of Principals.....	38
Internally Imposed Constructs and Gender.....	42
Internally Imposed Constructs and Level of Assignment.....	43
Internally Imposed Constructs and Professional Development	43
Internally Imposed Constructs and Non-Educational Settings	45
Repertory Grid	48
Summary and Conclusions Drawn from the Literature	54
CHAPTER THREE: METHODOLOGY	56
Research Context	56
Research Assumptions	57
Study Participants	58
Instruments Used in Data Collection	60

Procedures Used in the Interviews.....	62
Procedures Used in First Interview.....	62
Full Context Elicitation.....	62
Laddering.....	62
Triadic Analysis.....	63
Procedure Used in Second Interview.....	63
Full Grid Completion.....	63
Analysis of Data.....	65
Summary.....	67
CHAPTER FOUR: FINDINGS.....	68
Research Question One.....	71
Principal M1E1.....	72
Principal M2E2.....	76
Principal M3E3.....	80
Principal M4E4.....	84
Principal M5E5.....	88
Principal F1E6.....	91
Principal F2E7.....	95
Principal F3E8.....	99
Principal F4E9.....	103
Principal F5E10.....	106
Principal M6M1.....	110
Principal M7M2.....	114
Principal F6M3.....	117
Principal F7M4.....	121
Principal M8H1.....	125
Principal M9H2.....	129
Research Question Two.....	133
Generalized Procrustes Analysis: Gender.....	133
Principal Components Analysis: Gender.....	135
Generalized Procrustes Analysis: Females.....	136
Principal Components Analysis: Females.....	138
Generalized Procrustes Analysis: Males.....	139
Principal Components Analysis: Males.....	141
Research Question Three.....	142
Generalized Procrustes Analysis: Level of Assignment.....	143
Principal Components Analysis: Level of Assignment.....	145
Generalized Procrustes Analysis: Elementary School Principals.....	146
Principal Components Analysis: Elementary School Principals.....	148
Generalized Procrustes Analysis: Middle School Principals.....	149
Principal Components Analysis: Middle School Principals.....	151
Generalized Procrustes Analysis: High School Principals.....	152
Principal Components Analysis: High School Principals.....	154
CHAPTER FIVE: CONCLUSION.....	156
Summary.....	156
Findings.....	158

Research Question One.....	159
Research Question Two	160
Research Question Three	162
Conclusions.....	164
Implications for Educational Leadership	165
Recommendations for Future Research	170
APPENDIX A: UCF-IRB APPROVAL LETTER.....	172
APPENDIX B: SCHOOL DISTRICT OF LEE COUNTY APPROVAL LETTER.....	174
APPENDIX C: PARTICIPANT SOLICITATION EMAIL.....	176
APPENDIX D: PARTICIPANT SOLICITATION FOLLOW-UP EMAIL	178
APPENDIX E: FIRST INTERVIEW CONFIRMATION EMAIL.....	180
APPENDIX F: INTERVIEW PREPARATION EMAIL.....	182
APPENDIX G: INFORMED CONSENT LETTER.....	184
APPENDIX H: FLORIDA PRINCIPAL COMPETENCIES: SCHOOL COMMUNICATIONS (FLORIDA DEPARTMENT OF EDUCATION, 2002)	186
APPENDIX I: FLORIDA PRINCIPAL COMPETENCIES: SCHOOL MANAGEMENT (FLORIDA DEPARTMENT OF EDUCATION, 2002)	189
APPENDIX J: FLORIDA PRINCIPAL COMPETENCIES: SCHOOL OPERATIONS (FLORIDA DEPARTMENT OF EDUCATION, 2002)	193
APPENDIX K: PARTICIPANT BIOGRAPHY	199
APPENDIX L: CONSTRUCT ELICIATION SCRIPT	202
APPENDIX M: SECOND INTERVIEW CONFIRMATION EMAIL.....	205
APPENDIX N: REPERTORY GRID TEST	207
APPENDIX O: REPERTORY GRID TEST SCRIPT.....	209
APPENDIX P: THANK YOU LETTER.....	211
LIST OF REFERENCES	213

LIST OF TABLES

Table 1 Participant Solicitation Response	60
Table 2 Options for Rating	64
Table 3 Male Elementary School Principal (M1E1): Repertory Grid	75
Table 4 Male Elementary School Principal (M2E2): Repertory Grid	79
Table 5 Male Elementary School Principal (M3E3): Repertory Grid	83
Table 6 Male Elementary School Principal (M4E4): Repertory Grid	87
Table 7 Male Elementary School Principal (M5E5): Repertory Grid	90
Table 8 Female Elementary School Principal (F1E6): Repertory Grid	94
Table 9 Female Elementary School Principal (F2E7): Repertory Grid	98
Table 10 Female Elementary School Principal (F3E8): Repertory Grid	102
Table 11 Female Elementary School Principal (F4E9): Repertory Grid	105
Table 12 Female Elementary School Principal (F5E10): Repertory Grid	109
Table 13 Male Middle School Principal (M6M1): Repertory Grid	113
Table 14 Male Middle School Principal (M7M2): Repertory Grid	116
Table 15 Female Middle School Principal (F6M3): Repertory Grid	120
Table 16 Female Middle School Principal (F7M4): Repertory Grid	124
Table 17 Male High School Principal (M8H1): Repertory Grid	128
Table 18 Male High School Principal (M9H2): Repertory Grid	132
Table 19 Generalized Procrustes Analysis: Gender	135
Table 20 Generalized Procrustes Analysis: Females	138
Table 21 Generalized Procrustes Analysis: Males	141
Table 22 Generalized Procrustes Analysis: Level of Assignment	145
Table 23 Generalized Procrustes Analysis: Elementary School Principals	148
Table 24 Generalized Procrustes Analysis: Middle School Principals	151
Table 25 Generalized Procrustes Analysis: High School Principals	154

LIST OF FIGURES

Figure 1: Element Cards Representing the Florida Principal Competencies (Appendixes H-J)	10
Figure 2: Repertory Grid Test Design (Boeree, 1997)	11
Figure 3: Principal Components Analysis (Correlations) for Procrustes Statistics - Gender	136
Figure 4: Principal Components Analysis (Correlations) for Consensus - Females	139
Figure 5: Principal Components Analysis (Correlations) for Consensus - Males	142
Figure 6: Principal Components Analysis (Correlations) for Procrustes Statistics - Level of Assignment	146
Figure 7: Principal Components Analysis (Correlations) for Consensus - Elementary School Principals	149
Figure 8: Principal Components Analysis (Correlations) for Consensus - Middle School Principals	152
Figure 9: Principal Components Analysis (Correlations) for Consensus - High School Principals	155

CHAPTER ONE

INTRODUCTION

Increased concern over the productivity and effectiveness of public schooling in the United States has focused attention on the principal, the person responsible for leadership at each school (Manasse, 1984). According to Mackenzie (1983), the general finding from studies designed to identify the specific elements that contribute to the success of a school recognize the leadership of the principal as the most significant factor in determining whether a school is successful.

Yukl (1989) believed that leadership could be studied in many different ways depending on the researcher's conception of leadership and the method of research. While researchers in educational administration conclude that successful schools hinge on the leadership of the principal (Aitken, 1995; Mackenzie, 1983), few studies have gone beyond describing the careers of principals. Research can be found on the early years of the principals' career (Daresh, 2001), stages in the careers of principals (Day & Bakioglu, 1996), and on the career succession of principals (Hart, 1993). Cunningham and Cordeiro (2000) reported that the most important responsibilities in the career of the principal were the development of a vision and the ability to motivate staff.

In an effort to link principal leadership to productive schools and enhanced academic outcomes, mandates have been legislated and extensive lists of principal competencies have been compiled by educational entities across the United States. The Florida Legislature established the Management Training Act in 1979 to provide a state, regional, and district support system to ensure principals and other educational managers

had the skills, experience, and academic background necessary to be effective leaders (Fletcher, Summers, Chasteen, & Hovametz, 2000). While the intent of the Management Training Act was to provide a framework to prepare principals to be effective school managers, Fletcher et al. reported that after the act was passed in 1979, only statutorily assigned responsibilities were performed and the Act was never fully implemented due to the lack of stakeholder input on issues needed for the development of principals and school managers.

In 1992 the National Policy Board for Educational Administration (NPBEA) outlined 21 domains in which principals were required to display competency. The set of essential skills and knowledge identified by the NPBEA include leadership, information collection, problem analysis, judgment, organizational oversight, implementation, delegation, instructional and learning environment, curriculum design, student guidance and development, staff development, measurement and evaluation, resource allocation, motivating others, interpersonal sensitivity, oral and nonverbal expression, written expression, philosophical and cultural values, legal and regulatory applications, policy and political influences, and public relations (National Policy Board for Educational Administration, 1992).

In 1996 the Interstate School Leaders Licensure Consortium (ISLLC) adopted six standards that represented a common core of knowledge, dispositions, and performances. The six standards identified by the ISLLC described the school administrator as an educational leader who promoted the success for all students through a vision of learning, the school culture and instructional program, management, collaboration with families and community, acting with integrity, fairness, and ethics, and an awareness of the larger

political, social, economic, legal, and cultural context (Council of Chief State Officers, 1996).

In 2002 the Florida Department of Education published the *Competencies and Skills Required for Certification in Educational Leadership in Florida, Second Edition*, which detailed the requirements for demonstrating competency and knowledge in the areas of school management, school communication, and school operations. In each of these areas, narratives and sub competencies further delineate the certification requirements for principals in Florida. The externally imposed descriptions and expectations of the leadership behavior of principals represent an attempt to secure a universal description of what it meant to be a leader.

The focused attention on principal leadership needs to go beyond descriptive studies, mandates, and competency lists to seek the meaning that principals ascribe to their thoughts, words, and actions (Krug, Ahadi, & Scott, 1990). By exploring the transparent templates which principals create and attempt to fit over the realities of their world, the well developed personal constructs that govern their leadership behavior may provide a more profound explanation of principal leadership.

Kelly (1955) used the term personal construct to describe the basic unit of cognitive structures. Kelly described personal constructs as “transparent patterns or templates which he (man) [sic] creates and then attempts to fit over the realities of which the world is composed” (pp. 8-9). Kelly believed it is the development of personal constructs that is the processing agent of cognition. Kelly stated that “man [sic] creates his own ways of seeing the world in which he lives; the world does not create them for him” (p. 12). He continued to claim that “we assume that all of our present interpretations

of the universe are subject to revision or replacement.” Kelly referred to this philosophical position as “constructive alternativism” (p. 15) which means that people can and do alter their personal orientations. Ravenette (1999) interpreted Kelly’s definition of personal constructs as persons creating their own personal meaning of themselves and their worlds out of their awareness of the similarities and differences arising from the succession of events with which they are confronted. These discriminations lead to the development of bipolar constructs which progressively become interrelated into systems enabling the persons to anticipate with varying degrees of success the likely outcomes of their encounters with the world. Ravenette maintains that central to these systems are the core constructs by which the individuals define themselves.

Problem Statement

Principal leadership directly influences the success of a school (Aitken, 1995; Mackenzie, 1983). This study intended to explore the personal constructs of principals to discover the meaning they ascribe to their leadership behavior in anticipation and interpretation of events. The following research questions were formulated to guide this exploration:

1. What are the transparent templates principals create and attempt to fit over the realities of which their world is composed?
2. Are there patterns in the data that suggest differences related to gender?
3. Are there patterns in the data that suggest differences related to level of assignment?

Purpose of the Study

The purpose of this study was to explore the personal constructs of principals through a process designed by Kelly (1955) to reveal how individuals ascribe meaning to their behavior. According to Kelly, these core constructs are essential for the maintenance of a sense of self and the understanding of present and future roles.

Participants in this study included sixteen principals in an urban school district that serves over 70,000 students in southwest Florida. The criterion for choice of this method was to understand more about the principals' personal meaning of leadership through their engagement in the construing process (Fransella & Dalton, 2000). In Kelly's (1955) words:

Can we, as rank outsiders, crawl into this subject's skin and peep out at the world through his eyes? Perhaps not. But it should be possible to derive data from this protocol which can be meaningfully perceived within our own personal construct systems. (p. 277).

Definition of Terms

1. Personal Constructs – Kelly (1955) defined personal constructs as the systems that a person builds in anticipation and interpretation of events based on the past and present events in their lives. Kelly believed it is the development of personal constructs that is the processing agent of cognition.
2. Principal – Person who is a full-time administrative staff member officially recognized by the state of Florida through certification in educational leadership, is assigned to one school, is responsible for leadership at their school of assignment, and is recognized as principals by the school district in which they are employed. Florida's current licensing rules require candidates for certification in educational leadership to have taught for a minimum of three years, earned a

master's degree or higher, and completed training in specified areas such as management, education law, and curriculum and instruction (Archer, 2002).

3. Leadership Behavior - Chemers (1997) defined leadership behavior as a process of social influences in which one person is able to enlist the aid and support of others in the accomplishment of a common task.

Conceptual Framework: Personal Construct Theory

Principals engage in leadership behavior based on an abundance of knowledge constructed from a lifetime of personal and professional events. Through engaging in these events, principals construct an internal system to sustain their leadership. Personal constructs are defined by Kelly (1955) as the systems that a person builds in anticipation and interpretation of events based on the past and present events in their lives.

Kelly's (1955) personal construct theory provided the conceptual framework and methodology for this study of the personal constructs of principals. Kelly found that different backgrounds and experiences create different interpretations of the same event and that it is the individuals' past experiences and personal construction of the event that shapes the interpretation, not the event itself. Also, Kelly promoted the idea that an individual's current acts and undertakings contribute to the development of personality just as much as the imprint of events with which they have experienced in the past.

Personal construct theory presents basic assumptions about personal orientations that were fundamental to this study. Kelly (1955) asserted that "...man seeks to improve his constructs by increasing his repertory, by altering them to provide better fits, and by subsuming them with super ordinate constructs. "(p. 9). Kelly's definition of personal

constructs and related methodology guided this exploration into the meaning principals ascribe to their leadership behavior.

Methods

The study explored the research questions through qualitative inquiry. Data were collected in a process that began with full context elicitation, laddering, and triadic analysis, and proceeded to full grid quantitative analysis. It was anticipated that the full grid analysis of data would reveal that principals anticipate and interpret events with well developed personal constructs that govern their thoughts, words, and actions.

Participants

The population included sixteen principals in the School District of Lee County selected by the researcher. The initial criteria for selection of principals was more than five years of experience as an administrator, represented elementary and secondary levels of assignment, equally represent gender, and a record devoid of disciplinary action. Challenges in securing voluntary participation in the study required criteria for selection of principals to be modified to include participants with more than five years of experience as an administrator, represented elementary and secondary levels of assignment, and unequally represented gender.

The study participants included sixteen principals who voluntarily responded to participant solicitation in the form of emails and phone calls. Nine male and seven female principals agreed to participate. To maintain confidentiality, specific information regarding the participants was not presented. For ethical reasons, responses were coded in non-identifying ways.

Assumptions

It was assumed that the participants in this study would answer honestly and candidly. It was also assumed that data from the full context elicitation and full grid analysis would validly and reliably collect the participant's responses, that information provided by participants involved in the study would be accurate, and that the perceptions of the participants would relate to current practice.

Instruments

Kelly's (1955) personal construct interview and the Repertory Grid technique were used to collect data in this exploration. The validity and reliability of Kelly's personal construct methodology has been established in numerous studies since its inception. This study began with full context elicitation, laddering, and triadic analysis, and proceeded to full grid analysis. Through engaging in this interactive process, principals experienced a thorough, objective, and productive way to express through language the meaning they ascribe to their leadership behavior.

Two pilot studies were conducted to gain experience in using personal construct methodology. In 2005, the participants were employed in Collier County School District and included one female elementary principal with nine years experience and one male middle school principal with six years experience. The procedure for the pilot studies began with providing an overview of the study. The participants were familiar with the elements, the Florida Principal Competencies (Appendixes H-J), which were compared and contrasted during the personal construct interviews. The participants actively engaged in the process without trepidation. During the personal construct interviews, the

technique of laddering was applied to elicit the participant's identification of bipolar personal constructs.

At the conclusion of the process, participants were asked for their views on the experience; both participants expressed that engaging in the process enhanced their reflection of practice. Both participants suggested providing principals with the Florida Principal Competencies (Appendixes H-J) prior to the first interview to encourage participant reflection during the construct elicitation. Themes that emerged in the pilot studies revealed that the participants believed that principal competencies did not relate to practice, administrator preparation coursework did not prepare principals for practice, and professional development did not improve practice. The results of the pilot studies confirmed that the study design would comprehensively address the research questions.

Data Collection

Data were collected in a case study approach using full context elicitation, laddering, triadic analysis, and full grid completion (Kelly, 1955). Two interviews with each principal were conducted to elicit personal constructs and Repertory Grid test completion. In the first interview, a set of cards was placed in front of the principal, with the elements representing the Florida Principal Competencies (Appendixes H-J) written on each card. Kelly referred to this technique as full context elicitation. The researcher in this study facilitated the principals' expression of meaning using laddering, a technique developed by Kelly to enable the researcher to get closer to the person's core values and preferences with questions such as, "Why is that an important distinction to make about the elements?" or "Which end of the pole do you prefer?". Through triadic analysis, the principals then compared and contrasted the elements by explaining their expression of

meaning in three areas: a clear contrast, appropriate detail, and a clear relationship to the topic (Jankowicz, 2004). The estimated amount of time for the first interview was one and one half hours.

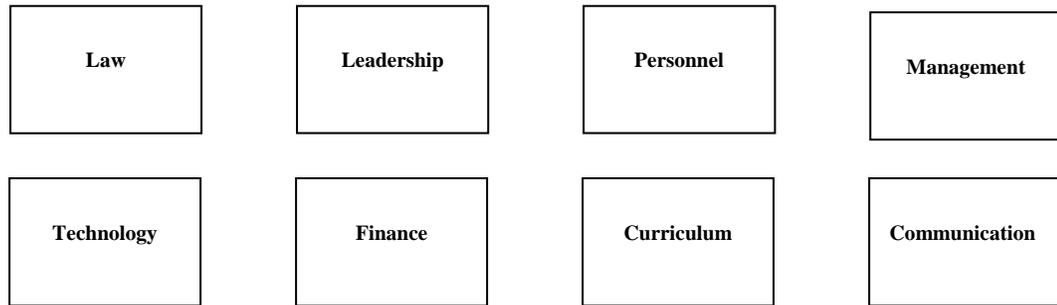


Figure 1: Element Cards Representing the Florida Principal Competencies (Appendixes H-J)

In the second interview, each principal rated self in completing one Repertory Grid. The design of the Repertory Grid incorporated the Florida Principal Competencies (Appendixes H-J) Florida Department of Education, 2002) as the elements and the principals' bipolar personal constructs that statistical analysis found to be most representative. A content analysis of the Repertory Grids revealed the themes that emerged and were used to address the research questions. The estimated amount of time for the second interview was one hour.

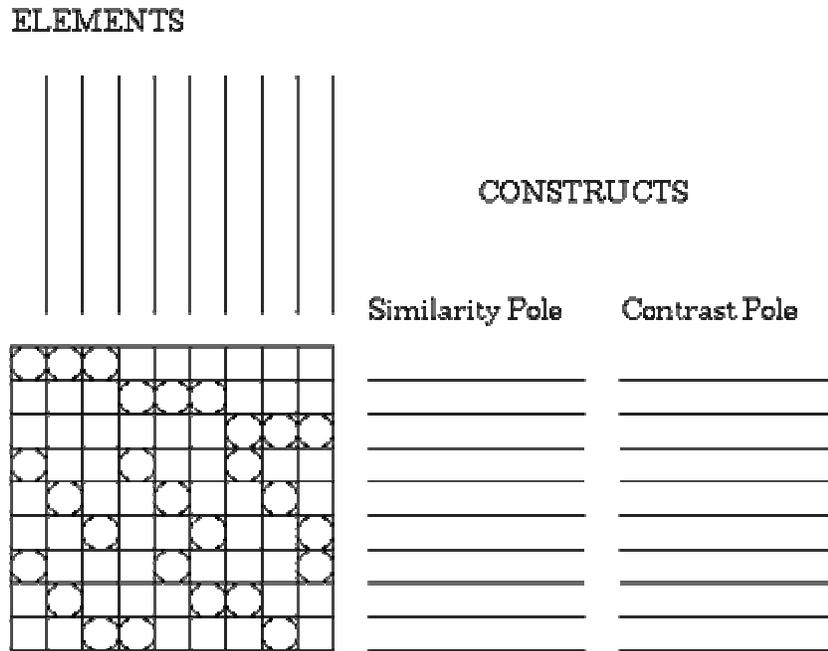


Figure 2: Repertory Grid Test Design (Boeree, 1997)

Data Analysis

The data collected in this study were analyzed using Idiogrid software (Grice, 2002) to provide examination of responses and manage data throughout analysis. All data were organized in spreadsheets that dealt with textual, as well as, numeric data in a structured way to allow for easy access to clarify Repertory Grid technique. This provided options to change coding and make other adjustments where it was necessary so that results could be reported in an ethical manner.

To address research question one, descriptive statistics were computed for the elicited constructs and for summarizing grid data to summarize and describe the characteristics of each grid. An Extremity in Ratings Analysis was also conducted to provide insights into construct and element extremities for each participant. An Extremity of Ratings Analysis simply tallies the frequencies for a rating of +3 for each construct

and element to illustrate extremities. High percentages in the Extremity in Ratings Analysis led to assumptions related to the constructs and elements that participant's used in their transparent templates.

To address research questions two and three, each grid was decomposed into different sources of variation using a Generalized Procrustes Analysis format to develop consensus grids for gender and level of assignment by computing the ratings for the constructs and elements. The Generalized Procrustes Analysis identified trends in the data as well as areas of agreement.

A Principal Components Analysis was then conducted on the results from the Generalized Procrustes Analysis to identify correlations related to gender and level of assignment. At the conclusion of the study, each participant received an individualized analysis that included a graphic display of ratings, descriptive statistics, and a narrative summarizing the findings of the study.

Limitations and Delimitations

1. The study was delimited to participation from persons who were a full-time principals officially recognized by the state of Florida through certification in educational leadership.
2. Principals were delimited to current employees in one public school district in southwest Florida who had primary responsibility for one school of assignment.

Significance of the Study

The findings from the study addressed the research questions and may serve to increase the awareness level in the professional community of the meaning that principals

ascribe to their leadership behavior. The findings also indicated that an adaptation of Kelly's (1955) process to principal leadership preparation and professional development programs may develop more self-aware, productive, and effective principals (Petri, Lindauer, & Tountasakis, 2000).

Data collected in this study assisted in the design of Repertory Grid tests for use in future research in the leadership behavior of principals from different geographical regions. Results from this research may reveal the influence of geographical region on the personal construct systems that principals build in anticipation and interpretation of events. Future research may also present results that contribute to the redesign of the selection process and the professional development of principals.

Justification for the Research

Prior research has not focused on exploring the personal constructs of principals. Research can be found on the early years of the principals' career (Daresh, 2001), stages in the careers of principals (Day & Bakioglu, 1996), and on the succession of principals (Hart, 1993). Cunningham and Cordeiro (2000) reported that the most important responsibilities in the career of the principal were the development of a vision and the ability to motivate staff. Limited attention has been given to the meaning that principals ascribe to their leadership behavior. The focused interest on principal leadership needs to go beyond descriptive studies, mandates, and competency lists to seek the meaning that principals ascribe to their thoughts, words, and actions (Krug, Ahadi, & Scott, 1990).

This study sought to go beyond externally imposed descriptions of the leadership behavior of principals, exploring their personal constructs to discover the meaning that principals ascribe to their leadership behavior in anticipation and interpretation of events.

An extensive review of literature was done to determine whether this type of study has been done before. Sendan (1995) conducted a study on teacher effectiveness using personal construct theory as a conceptual framework to describe the complexities of change in teacher thinking. He suspected that prior research had approached teacher thinking in one-dimensional lists of variables that did not reflect the complexity of learning processes or the systematic nature of changes in teacher thinking. Sendan sought to describe the ways in which teacher thinking developed as a process and how personal constructs related to each other as a system. Sendan discovered that personal construct theory invited the researcher into the lived experience of others via a coherent language that could be used to frame questions and explain individual thought processes. In Sendan's study, cross-sectional data using individually elicited grids was obtained from twelve students in education relative to the nature of and development of personal theories regarding the effectiveness in English teaching of Turkish student teachers in a four-year postgraduate course. Results from Sendan's study indicated that personal construct methodology can be used to reveal the nature of evolutionary shifts in the structure of participants' construal of themselves as teachers. Sendan's results support this study in which personal construct methodology may reveal the principals' construal of themselves as leaders.

Organization of the Study

This study sought to go beyond externally imposed descriptions of the leadership behavior of principals, exploring their personal constructs to discover the meaning that principals ascribe to their leadership behavior in anticipation and interpretation of events. The results indicated that principals anticipate and interpret events with well developed

personal constructs. Chapter One introduced the study, the research questions, and outlined its limitations. Chapter Two presents a review of literature related to the study. Chapter Three explains the framework for the study and the methods used for data collection and analysis. Chapter Four presents the data and its analysis. Chapter Five summarizes findings, conclusions, implications, and recommendations for further research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE AND RESEARCH

Principals in America are generally expected to carry out all the duties needed to run effective schools. The American Association of School Administrators (AASA) stated that effective schools had at least one thing in common: sound leadership (American Association of School Administrators, 1991). Glatthorn (1994) affirmed that regardless of the committee structure used for curriculum work at the school, the need for strong leadership by the principal is paramount. The consensus is that effective schools require a principal with solid leadership skills.

This study explored the meaning that principals ascribe to their leadership behavior that directly impacts the effectiveness of their school. A survey of the related literature and research on the meaning that principals attribute to their leadership behavior is best approached by considering both the externally imposed descriptions that influence principals and the internally imposed descriptions that affect principals. Externally imposed descriptions of leadership behavior encompass the external expectations specific to the role of principal that have been developed by entities largely for certification and evaluation purposes. Internally imposed descriptions of leadership behavior include the internal expectations specific to the role of principal that have been constructed by the individual from a lifetime of personal and professional events. All of these external and internal influences work in tandem to impact the systems that principals build in anticipation and interpretation of events that demand leadership behavior.

The first part of this review will summarize research on the history of externally imposed descriptions of leadership behavior and the external expectations specific to the role of the principal. Externally imposed descriptions that influence the leadership behavior of principals originate from leadership theories, legislated mandates, and extensive lists of principal competencies. In his review of contemporary leadership theories, Chemers (1997) suggested that leadership was a group activity comprised of intrapersonal factors interacting with interpersonal processes with a focus on internal maintenance and external adaptability. Mandates and lists delineate the expectations of external entities who seek to describe the role of principal and then apply this description as criteria for evaluating principals in their role as leader.

The second part of this review will present research on the nature of personal construct theory as it relates to internally imposed constructs of leadership behavior and internal expectations as differentiated by gender and level of assignment. Principals internally impose well developed personal constructs based on an abundance of knowledge constructed from a lifetime of personal and professional events. The internally imposed personal constructs that enable principals to ascribe meaning to their leadership behavior were described by Kelly (1955) as the “transparent patterns or templates which he (man) [sic] creates and then attempts to fit over the realities of which the world is composed” (pp. 8-9). Additional literature was reviewed in the areas of professional development and non-educational settings to provoke consideration of optional applications.

The third part of this review will present research on the Repertory Grid technique to establish the validity of applying Kelly’s methodology to explore the meaning

principals ascribe to their leadership behavior. Personal construct theory was conceived on Kelly's (1955) belief that people constructed reality with anticipation or expectation just like scientists construct theory with assumptions or hypotheses and engaged in behaviors to test their anticipations or expectations the way scientists conducted experiments to adjust their theories to fit the facts. Kelly designed the role construct repertory test to be used as an instrument to measure personal constructs statistically. The word repertory is a derivation of repertoire; in this method, Kelly sought to explore the repertoire of personal constructs the individual had developed. The Repertory Grid test used in this study is a form of the role construct repertory test with elements listed along one axis and personal constructs listed along the other, forming a grid that, according to Kelly, would look beyond the words describing personal constructs (Fransella & Bannister, 1977). In this study, the Repertory Grid test represented a process through which a picture was created by the principals themselves of their view of reality (Boeree, 1997).

Externally Imposed Descriptions and Expectations of the Leadership Behavior of Principals

Externally imposed descriptions and expectations of the leadership behavior of principals have traditionally borrowed from leadership theorists who endeavored to observe leaders, understand leadership, and ultimately secure a universal description of what it means to be a leader. Bennis and Nanus (1985) reviewed the literature only to discover over 350 descriptions of leadership behavior. Bass (1990) believed there were as many descriptions of leadership behavior as there were persons describing it. Burns' (1978) stated that leadership was one of the most observed and least understood

phenomena on earth. Parrish (2001) found that descriptions of leadership behavior went as far back as biblical times, yet a universal description of leadership behavior remains elusive.

While Gorton and Snowdon (1997) claimed that some type of leadership contribution was necessary to administer a school effectively, a balance between external and internal influence is essential in the leadership behavior of principals. Cunningham and Cordeiro (2000) described the principal as a leader who must be prepared to deal with the inevitable social, cultural, economic, technological, bureaucratic, and political obstacles that can block improvement efforts. The leadership behavior of principals has been described by Bacharach and Mundell (1995) as a reciprocal relationship between internal and external constituencies to influence the school environment and garner support for the development and effectiveness of school programs. Foster, Loving, and Shumate (2000) discovered that principals were well aware that they could not achieve school success alone; principals must rely on the help and support of students, teachers, staff, central office, parents, community partners, and university collaborators. Findings from these studies support that externally and internally imposed influences are in constant synergy impacting the leadership behavior of principals.

The increase in concern over improving education as well as the productivity and effectiveness of public schools in the United States focused attention on the principal, the person responsible for leadership at each school (Manasse, 1984). During the past 50 years, federal entities have focused policy initiatives on the pivotal issues of improving education as a national security issue and questioning the productivity and effectiveness of public schools (G.E. Pawlas, personal communication, January 15, 2003). In response

to the Soviet launch of Sputnik in 1957, the National Defense Education Act was passed in 1958. This law charged educators with the task of assisting students in maximizing their academic potential and provided funding to improve academic achievement, especially for students with low academic motivation. The space race and civil rights movement continued to fuel the momentum for improving academic achievement throughout the 1960s and 1970s. In 1983, a *Nation at Risk* condemned American public schools for their poor performance and challenged educators to set higher standards of learning for all students. In 1988, the Education Reform Act was passed to provide funding for schools to meet this challenge through restructuring and reform. In 1989, six national education goals were proposed at an historic education summit where governors met with President Bush to initiate discourse on changes in public secondary education. In 1991, these goals were integrated into the U.S. Department of Education's *America 2000: An Education Strategy*. In 1994, Goals 2000 was passed to provide funding to raise academic standards, improve teaching, increase parental involvement, and expand the use of technology. In 1994, the Improving America's Schools Act reformed Title I to provide funding for teaching basic and advanced skills in high-poverty schools, expand professional development for educators to meet the new standards, and offer start-up funds to charter schools. In 1997, the Individuals with Disabilities Act was reauthorized to reinforce higher standards for all children as well as support for bilingual education programs.

It is no coincidence that to secure the funding this federal legislation had made available, state entities across the country were motivated to pass mandates which significantly influenced the leadership behavior of the principal. At the local level, school

districts overhauled their selection criteria, professional development, and evaluation of principals to reflect the federal and state directives. In conjunction with federal, state, and local efforts, higher education revamped educational leadership courses to prepare aspiring principals to transition into a transformed role that personified the skills found in theories and on lists.

Contemporary Leadership Theories

In this section, contemporary leadership theories will be reviewed to include trait theory (Carlyle (1841/1907), contingency theory (Fiedler, 1964), the normative decision model (Vroom & Yetton, 1973; Vroom & Yago, 1974), the multiple-influence model (Hunt & Osborn, 1980, 1982), the multiple linkage model (Yukl, 1989), exchange theory (Homans, 1961), transactional theory (Hollander, 1958), transformational theory (Bass, 1985) charismatic leadership theory (House, 1977), and cognitive approaches (Lord & Emrich, 2001).

Trait Theory

Trait theory focuses on the identification of reliable differences in personal characteristics (Chemers, 1997). The great man theory of leadership formulated by Carlyle (1841/1907) supported that leaders had special traits or personality characteristics that enabled them to naturally assume a position of leadership. Following an extensive literature investigation, Stogdill (1948) found weak support for traits that were able to accurately predict leadership ability. Chemers presented research to support that becoming a leader is often contingent upon being in the right place at the right time.

Contingency Theory

In the contingency model of leadership, Fiedler (1964) proposed that leadership is based on a fit between the leader's orientation, inclinations, skills, and demands of the leadership situation. Chemers (1997) defined leadership in contingency theory as dependent on interpersonal relationships in specific contexts with certain individuals able to lead better in situations than others. Subsequent research in contingency theory agreed in the importance of the leader involving followers in defining problems and making decisions (Chemers, 1997).

Normative Decision Model. The predictions and parameters of the normative decision model (Vroom & Yetton, 1973) suggested a form of leadership that demands control of the process by which decisions were made. The main principle of the normative decision model was that decision making that involved participants increased commitment but were costly (Maier, 1963). Another principle of the normative decision model was that the quality of the information contributed to the quality of the decision. As a result, Vroom and Yago (1973) expanded the original model to include decision strategies that took into consideration situational parameters and was guided by a list of rules to protect decisions from deficiencies. The expanded model was referred to as the Vroom-Yetton-Yago model.

Multiple-Influence Model. Hunt and Osborn (1980, 1982) expanded contingency models to assert that leadership depends on the way the leader interprets and responds to constraints imposed by the organization. The multiple-influence model argues that the leader's role is to use knowledge and skill to bridge the gap between expectations and reality (Chemers, 1997).

Multiple Linkage Model. The multiple linkage model (Yukl, 1989) is an integrative contingency theory that presented six process variables as intervening to impact leadership behavior: subordinate effort, role clarity, work organization, cooperation, and resources. Yukl created a taxonomy in which leadership behaviors were categorized and linked to the six process variables.

Exchange Theory

Chemers (1997) described exchange theories as based on principles of behavior adapted to social interactions and interpreted using the economic terms of profit and loss. One of the major exchange theorists, Homans (1961) stated that when people interact socially, they exchange behaviors to either reward or punish each other resulting in a profit or a loss. Homans also supported fair exchanges in what he called distributive justice that occurred when individuals received rewards proportional to costs.

Transactional Theory

Hollander (1958) defined leadership as transactional based on the on-going social exchange between leaders and followers. Hollander based leader legitimacy on the leader's competence to accomplish group goals and remain loyal to these goals. Transactional leadership relies on contingent rewards to positively reinforce interactions and management by exception where the leader only intervenes when things go wrong (Chemers, 1997).

Transformational Theory

Leadership that transforms the goals of followers from self-interest to collective achievement is defined by Bass (1985) as transformational reflecting inspirational motivation, intellectual stimulation, and individualized consideration.

Charismatic Leadership Theory. Transformational leadership requires charisma which is closely associated with House's (1976) theory of charismatic leadership in which leaders are able to increase the intrinsic value of motivation in their followers. House maintained that seven motivational processes could be activated through charismatic leadership: faith instilment, symbolism, self-efficacy, self-esteem, linking goals to vision, vision identification, and motive arousal. House claimed that charismatic leadership is most successful in times of tension, disorganization, frustration, or stress.

Cognitive Approaches

Chemers (1997) described the cognitive approach to leadership as based on the leader's actions reflecting the needs and desires of followers. Lord and Enrich (2001) suggested the following:

Leadership factors reside not only in the minds of followers, but in the minds of leaders, in leaders' behaviors and attitudes, and in the social context in which leaders and their followers interact (p.571).

Literature was reviewed on contemporary leadership theories to present an overview of scholarly attempts to personify leadership behavior. Chemers (1997) asserted that, "Contemporary leadership theory has been described as complex, fragmented, and contradictory, making its study frustrating for the scholar and its application difficult for the practitioner." (p. ix). The next section discusses the efforts of state and national

entities to apply the characteristics of leadership behavior to the role of the principal, the practitioner.

State Entities

This study was limited to one school district in Florida hence literature was reviewed pertinent to the history behind Florida legislation that had a direct impact on the principal. In 1979, the Management Training Act was passed to formally recognize that effective principals were fundamental to successful schools and to provide a state, regional, and district support system to ensure principals and other educational managers had the skills, experience, and academic background necessary to be effective leaders (Fletcher et al., 2000). The Management Training Act also recommended that universities educate aspiring principals in the fundamentals of knowledge associated with educational leadership (Stevenson & Goldenberg, 2001). While the intent of the Management Training Act was to provide a framework to prepare principals to be effective school managers, Fletcher et al. reported that after the act was passed in 1979, only statutorily assigned responsibilities were performed and the Act was never fully implemented due to the lack of stakeholder input on issues needed for the development of principals and school managers.

In 1986, Florida Statute 231.0861 was amended to increase the scope of the Management Training Act and required the Florida Department of Education to identify the competencies necessary for successful performance of the duties as principal. As a result, the following nineteen competencies were identified to serve in selecting, training, certifying, and evaluating school principals in Florida (Florida Department of Education, 2005, ¶ 7):

1. **Proactive Orientation:** The inclination and readiness to initiate action and take responsibility for leading and enabling others to improve the circumstances being faced or anticipated.
2. **Decisiveness:** The readiness and confidence to make or share decisions in a timely manner, using appropriate levels of involvement so that actions may be taken and commitments made by self and others.
3. **Commitment to Vision and Mission:** A pledge to develop and act in accordance with the shared vision, mission, and values of the school.
4. **Interpersonal Sensitivity:** The ability to discover, understand, verbalize accurately, and respond empathetically to the perspectives, thoughts, ideas, and feelings of others.
5. **Information Search and Analysis:** The gathering and analysis of data from multiple sources arriving at an understanding of an event or problem.
6. **Concept Formation:** The ability to see patterns and relationships and form concepts, hypotheses, and ideas from the information.
7. **Conceptual Flexibility:** The ability to use alternate or multiple concepts or perspectives when solving a problem or making a decision.
8. **Managing Interaction:** Getting others to work together effectively through the use of group process and facilitator skills.
9. **Impact/Persuasiveness:** Influencing and having an effect upon the school stakeholders by a variety of means-persuasive argument, setting an example, or using expertise.
10. **Concern for the School's Reputation:** Caring about the impressions created by

self, the students, the faculty, the staff, and parents, and how these are communicated both inside and outside the school.

11. Tactical Adaptability: The ability to adapt one's interaction and behavior to the situation.
12. Achievement Orientation: Having to do things better than before by setting goals that encourage self and others to reach higher standards.
13. Management Control: The establishment of systematic processes to receive and provide feedback about the progress of work being done.
14. Developmental Orientation: Holding high and positive expectations for the growth and development of all stakeholders through modeling, self-development, coaching, and providing learning opportunities.
15. Organizational Ability: The know-how (knowledge and skill) to design, plan, and organize activities to achieve goals.
16. Delegation: Entrusting of jobs to be done, beyond routine assignments, to others, giving them the authority and responsibility for accomplishment.
17. Self-Presentation: The ability to clearly present one's ideas to others in an open, informative, and non-evaluative manner.
18. Written Communication: The ability to write clearly and concisely using good grammar.
19. Organizational Sensitivity: The awareness of the effects of one's behavior and decisions of all stakeholders both inside and outside the organization.

In 2002, the Florida Department of Education refined the nineteen competencies into three main areas of school management, school communications, and school

operations in the Competencies and Skills Required for Certification in Educational Leadership in Florida, Second Edition (Florida Department of Education, 2002, ¶ 2). In a departure from the list format that had prevailed, this publication offered comprehensive narrative descriptions detailing the leadership behavior expected of principals in Florida in each of the three areas. While principals may be inclined to tailor these expectations to their particular circumstances, the state of Florida may have believed that the homogenization of the role of principal had finally been achieved.

National Entities

National entities have contributed substantial effort and resources to the development of extensive lists of skills they believed to be crucial to the principals' leadership role. In 1988, the National Policy Board for Educational Administration (NPBEA) was founded by 10 national associations seeking to combine their energy and influence to advance the professional standards of educational administration by collective action (National Policy Board for Educational Administration, 2002). The NPBEA member associations include: The American Association of Colleges for Teacher Education (AACTE); the American Association of School Administrators (AASA); the Association of School Business Officials (ASBO); the Association for Supervision and Curriculum Development (ASCD); Council of Chief State School Officers (CCSSO); the National Association of Elementary School Principals (NAESP); the National Council of Professors of Educational Administration (NCPEA); the National School Boards Association (NSBA); and the University Council for Educational Administration (UCEA).

Sizer (1989) reported that the National Association of Secondary School

Principals (NASSP) was one of the first organizations to publish the most important skills for principals:

1. Develop teams, delegate responsibilities, and include team members from the community (p. 7).
2. Initiate and manage change and deal with ambiguities resulting from a dynamic system (p. 7).
3. Design effective learning environments for a wide range of students (p. 7).
4. Comment orally and in writing with acute sensitivity to a diverse public (p. 7).
5. Motivate students and staff to reach high expectations (p. 7).
6. Use technology to assist in instructing students and to manage the school (p. 7).
7. Evaluate programs and be accountable for student learning (p. 7).
8. Value and integrate culturally diverse students and staff into the life of the school to create a positive school culture (p. 7).
9. Work within the political forces which shape schooling (p. 7).

The National Association of Elementary School Principals (NAESP) published the required proficiencies for principals (National Association of Elementary School Principals, 1991):

1. Leadership Proficiencies: Exercise vision; recognize individual needs, encourage and develop leadership; analyze information, delegate responsibility; make decisions; coordinate resources; enhance teaching and learning; bond school community; and participate in professional groups (p. 21).
2. Communication Skills: Articulate and defend decisions; write clearly and concisely; utilize research, facts, and data; apply current technologies; use mass

media; actively listen; promote higher-level thinking skills; model effective behavior; and provide time to constituents (p. 21).

3. Group Process: Involve staff, parents, students, and community; resolve conflict; identify decision-making procedures and techniques; develop consensus; and achieve outcomes (p. 21).
4. Curriculum: Apply community values; encourage faculty input; seek resources; demonstrate knowledge; honor diversity; and enhance student learning (p. 21).
5. Instruction: Apply principles of growth, development, and learning; assess methods and strategies; articulate effective classroom planning, management, and instruction (p. 21).
6. Supervisory Proficiencies: Set high expectations and goals; honor diverse styles; implement behavior management; design staff development programs; encourage staff participation; and employ appropriate support services (p. 21-22).
7. Evaluation: Assess performance, progress, and effectiveness; encourage input; foster continuous improvement; apply observation and conferencing skills; inspire teachers; utilize formative and summative evaluation; develop professional growth plans; and follow due process (p.22).
8. Organizational Management: Identify and accomplish school mission; develop and implement procedures; select, assign, and organize staff; capitalize on research; facilitate professionals; attract volunteers; provide safe climate; coordinate community services; develop equitable schedules; manage time; delegate tasks; respond to issues and concerns; develop policies and practices; use technology; know school laws; and maintain the physical plant (p.22).

9. Fiscal Management: Understand school district budget; establish budget priorities; prepare school budget; employ and monitor accounting procedures; use cost control procedures; and find new resources (p. 22).
10. Political Management: Attract community and financial support; involve influential community members; address political issues; develop effective political strategies; and participate in legislative activities (p. 22).

In 1993, two major goals were articulated by the National Policy Board for Educational Administration (2002, p. 77):

1. The development of common and higher standards for the state licensure of principals.
2. The development of a common set of guidelines for the National Council for Accreditation of Teacher Education (NCATE) for advanced programs in educational leadership to prepare candidates for a broad range of leadership roles.

The first goal, the development of common and higher standards for the state licensure of principals, was achieved in 1993 in the NPBEA sponsored publication of a manual on the essential knowledge and skill base required of principals (Thomson, 1993). Under the auspices of the NPBEA, Thomson solicited input from a variety of professionals employed at all levels in educational entities across the country. He compiled their input into a manual and identified 21 domains requiring knowledge, skills, and proficiencies. The domains were grouped into the following four categories with narratives and subcategories to clarify expectations:

1. Functional Domain: The general managerial processes through which

administrators perform their functions (p. 3).

- a. Leadership
- b. Information Collection
- c. Problem Analysis
- d. Judgment
- e. Organizational Oversight
- f. Implementation
- g. Delegation

2. Interpersonal Domain: How administrators relate to their superiors, peers, subordinates, and the public (p. 5).

- a. Motivating Others
- b. Interpersonal Sensitivity
- c. Oral and Non-verbal Expression
- d. Written Expression

3. Contextual Domain: The external forces impacting an organization to include the intellectual, ethical, cultural, economic, political, and governmental influence that impinge upon schools (p. 7).

- a. Philosophical and Cultural Values
- b. Legal and Regulatory Applications
- c. Policy and Political Influences
- d. Public Relations

4. Programmatic Domain: Specific executive responsibilities that a principal must address and manage (p. 9).

- a. Instruction and Learning Environment
- b. Curriculum Design
- c. Student Guidance and Development
- d. Staff Development
- e. Measurement and Evaluation
- f. Resource Allocation

The Carnegie Foundation for the Advancement of Teaching and the National Association of Secondary School Principals (1995) brought together eighty educators and researchers from across the nation to address educational leadership. The group characterized the principal as the keeper of the dream who acts as an agent between the school and community, predicted that selection of principals in the 21st century would be based on qualities of leadership rooted in established knowledge and skills that resulted in dedication to good instructional practice and learning, and concluded that principals should define and sustain purpose, develop and nurture community, and foster personal and organizational growth. They advised current principals to build and refine the skills and knowledge required to lead and manage change.

The Interstate School Leaders Licensure Consortium (1996) developed six key areas for principal certification and evaluation (Council of Chief State Officers). These nationally recognized standards include:

1. A school administrator is an educational leader who promotes the success of all students by facilitating the development, articulation, implementation, and stewardship of a vision of learning that is shared and supported by the school community (p. 10).

2. A school administrator is an educational leader who promotes the success of all students by advocating, nurturing, and sustaining a school culture and instructional program conducive to student learning and staff professional growth. (p. 12).
3. A school administrator is an educational leader who promotes the success of all students by ensuring management of the organization, operations, and resources for a safe, efficient, and effective learning environment (p. 14).
4. A school administrator is an educational leader who promotes the success of all students by collaborating with families and community members, responding to diverse community interests and needs, and mobilizing community resources (p. 16).
5. A school administrator is an educational leader who promotes the success of all students by acting with integrity, fairness, and in an ethical manner (p. 18).
6. A school administrator is an educational leader who promotes the success of all students by understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context (p. 20).

In 2002, the second goal expressed by the NPBEA in 1993 was realized in the publication of a manual outlining the standards for advanced programs in educational leadership (National Policy Board on Educational Administration, 2002). Each National Policy Board for Educational Administration member association identified one individual to represent their interests in a working group formed to develop standards for advanced programs in educational leadership. In developing the standards, the working group relied upon two publications that embodied the profession's best thinking at the

time on educational leadership, the *Handbook of Research on Educational Administration* (Murphy & Louis, 1999) and the *21st Century Challenges for School Administrators* (Kowalski & Perreault, 2001). Additionally, the working group referenced the *Skills for Successful 21st Century School Leaders* (Hoyle, English, & Steffy, 1998) and the *Interstate School Leaders Licensure Consortium: Standards for School Leaders* (Council of Chief State School Officers, 1996) in developing the following standards:

1. Educational leaders have the knowledge and ability to promote the success of all students by facilitating the development, articulation, implementation, and stewardship of a school or district vision of learning supported by the school community.
 - a. Develop a Vision
 - b. Articulate a Vision
 - c. Implement a Vision
 - d. Steward a Vision
 - e. Promote Community Involvement
2. Educational leaders have the knowledge and ability to promote the success of all students by promoting a positive school culture, providing effective instructional programs, applying best practice to student learning, and designing comprehensive professional growth plans for staff.
 - a. Promote Positive School Culture
 - b. Provide Effective Instructional Program
 - c. Apply Best Practice to Student Learning

- d. Design Comprehensive Professional Growth Plans
3. Educational leaders have the knowledge and ability to promote the success of all students by managing the organization, operations, and resources in a way that promotes a safe, efficient, and effective learning environment.
 - a. Manage the Organization
 - b. Manage Operations
 - c. Manage Resources
 4. Educational leaders have the knowledge and ability to promote the success of all students by collaborating with families and other community members, responding to diverse community interests and needs, and mobilizing community resources.
 - a. Collaborate with Families and Other Community Members
 - b. Respond to Community Interests and Needs
 - c. Mobilize Community Resources
 5. Educational leaders have the knowledge and ability to promote the success of all students by acting with integrity, fairly, and in an ethical manner.
 - a. Acts with Integrity
 - b. Acts Fairly
 - c. Acts Ethically
 6. Educational leaders have the knowledge and ability to promote the success of all students by understanding, responding to, and influencing larger political, social, economic, legal, and cultural context.
 - a. Understand the Larger Context

- b. Respond to the Larger Context
 - c. Influence the Larger Context
- 7. Internship to provide significant opportunities to synthesize and apply the knowledge and practice and develop the skills identified in Standards 1-6 through substantial, sustained, standards-based work in real settings, planned and guided cooperatively by the institution and school district personnel for graduate credit.
 - a. Substantial
 - b. Sustained
 - c. Standards-based
 - d. Real Settings
 - e. Planned and Guided Cooperatively
 - f. Credit

Vincent Ferradino (2001), the executive director for the National Association of Elementary School Principals (NAESP) claimed that principals in the 21st century will require more than a compendium of skills. Ferradino believed that principals will face a different set of challenges in the 21st century due to the continuing changes in education and society. Ferradino asserted that today's outstanding school leaders already possess the attributes that tomorrow's principals will require. Beyond a compendium of skills, Ferradino stated that principals must have the capacity to lead others, the courage to stand for important ideas and values, and the fortitude to never lose sight of their vision.

The first part of this review summarized research on the history of externally imposed descriptions of leadership behavior and the external expectations specific to the role of the principal. Externally imposed descriptions that influence the leadership

behavior of principals were found to originate from legislated mandates and extensive lists of principal competencies. Mandates and lists delineated the expectations of external entities who sought to describe the role of principal and then apply this description as criteria for evaluating principals in their role as leader. The next section summarizes research on internally imposed personal constructs that enable individuals to ascribe meaning to their behavior.

Internally Imposed Descriptions and Expectations of the Leadership Behavior of Principals

Kelly's personal construct theory was introduced to the world in 1955 in the form of two volumes of work written in clinical terms that dramatically departed from the practice of mechanistic behaviorism prevalent at the time (Salmon, 1995). The handbooks for initial inquiry into personal construct psychology remain Kelly's (1955) two volume work of introduction to the theory. Volume one is of particular importance to the educator in that the theory is comprehensively explained in a manner conducive to implementation in alternative settings to psychology such as education. Volume two was designed for the psychologist with its concrete interpretation of the theory in relation to psychological disorders and therapy.

It was Kelly's (1955) belief that each person possessed knowledge and engaged with the world via a network of personal interpretations that he referred to as personal constructs. According to Boeree (1997), it was much easier for psychologists at the time to follow the clinical side of psychology found in Carl Rogers' theory than deal with the science side deeply mired in the behaviorist approach. If this wasn't enough to alienate the mainstream psychologists, Kelly proposed a cognitive revolution in which ordinary

people acted as personal scientists engaged in a unique experimental world in which meanings became viable through active exchanges with other people who also acted as personal scientists. Kelly believed that people constructed reality with anticipation or expectation just like scientists construct theory with assumptions or hypotheses and engaged in behaviors to test their anticipations or expectations the way scientists conducted experiments to adjust their theories to fit the facts. Cote (1995) reflected Kelly's personal scientist metaphor in his observation that people were constantly being challenged to evaluate, define, and interpret events in order to arrive at their own theory about the world around them. Kelly based his personal construct theory on his philosophy that people do not simply carry knowledge around in their heads; they act out the meanings behind this knowledge. As Salmon (1995) succinctly stated, "People are their constructs." (p. 21).

Cote (1995) asserted that Kelly (1955) believed people were driven by the need for personal control of their world and that this need was satisfied as a result of people being able to construct and predict the events in their everyday lives. Kelly developed his personal construct theory with a focus on the individual's interpretation of the event. Kelly alleged that different backgrounds and experiences create different interpretations of the same event, and it was the person's past experiences and personal construction of the event that shaped them, not the event itself. Kelly pursued the idea that one's current acts and undertakings contribute to the development of personality just as much as the imprint of events with which they came in contact. The fundamental postulate of personal construct theory is presented by Kelly as "A person's processes which are psychologically channelized by the ways in which he anticipates events." (p. 46). This

assumption is based on the recurrent theme of constructive alternativism which underlies personal construct theory. Constructive alternativism is defined by Cote as the assumption that each person is capable of changing or replacing present interpretation of events with an appropriate alternative. Kelly suggested that:

...constructs can be organized into systems, groups of constructs which embody subordinate and superordinate relationships with the same events viewed in the light of two or more systems. Yet the same events do not belong to any system. Moreover, man's practical systems have particular foci and limited ranges of convenience. (p. 12).

To elaborate on this fundamental postulate, Kelly (1955) introduced a hierarchical system to the order in which people construe events and the ways of classifying an individual's practical systems:

1. Construction Corollary: A person anticipates events by construing their replications (p. 50).
2. Individuality Corollary: Persons differ from each other in their construction of events (p. 55).
3. Organization Corollary: Each person characteristically evolves, for his convenience in anticipating events, a construction system embracing ordinal relationships between constructs (p. 56).
4. Dichotomy Corollary: A person's construction system is composed of a finite number of dichotomous constructs (p. 59).
5. Choice Corollary: A person chooses for himself that alternative in a dichotomized construct through which he anticipates the greater possibility for extension and definition of his system (p. 64).
6. Range Corollary: A construct is convenient for the anticipation of a finite range of events only (p. 68).

7. Experience Corollary: A person's construction system varies as he successively construes the replication of events (p. 72).
8. Modulation Corollary: The variation in a person's construction system is limited by the permeability of the constructs within whose range of convenience the variants lie (p. 77).
9. Fragmentation Corollary: A person may successively employ a variety of construction subsystems which are inferentially incompatible with each other (p. 84).
10. Commonality Corollary: To the extent that one person employs a construction of experience which is similar to that employed by another, his psychological processes are similar to those of the other person (p. 90).
11. Sociality Corollary: To the extent that one person construes the construction processes of another, he may play a role in a social process involving the other person (p. 95).

According to Kelly (1955), it was the experience corollary that had profound implications for learning. Kelly claimed that learning occurred continually as the person's construct system varied through successive construal of replications of events:

Construing is a way of seeing events in ways that make them look regular or familiar. By construing events it becomes possible to anticipate them. To be effective, the construction system itself must have some regularity. The palpable feature of regularity is repetition... of some characteristics which can be abstracted from each event and carried intact across the bridge of time and space. To construe is to hear the whisper of recurrent themes in the events that reverberate around us. (p. 76).

Kelly (1955) believed that learning occurred when the person was able to frame the experience in ways that allowed them to hear recurrent themes, define movements, and

validate predictions. It was not as a result of stimulus-response. Learning did not occur, according to Kelly, when the learner did not learn what they were expected to learn. The upside to his belief is that learning did in fact occur; it was just not the learning that had been anticipated.

Internally Imposed Constructs and Gender

Research on the nature of personal construct theory as it relates to internally imposed constructs and gender was discovered outside the realm of leadership. The findings are presented for consideration since this study questioned whether patterns in the data collected suggested differences related to gender. In 2001, Adams-Webber discovered that female participants were significantly more cognitively complex than were male participants in a study designed to assess individual differences in cognitive complexity. Participants included 40 couples (40 men, 40 women) who were administered Crockett's (1965) Role Category Questionnaire with results interpreted within the framework of Kelly's (1955) personal construct theory. Adams-Webber hypothesized that the more differentiated an individual's personal construct system, the less accurately other people can infer his or her self-constructions. In a subsequent unrelated study, Adams-Webber (2003) found no significant gender difference or interaction involving gender in his study involving 79 Canadian undergraduates (43 men, 36 women). Participants were administered a Repertory Grid test to rate 11 personal acquaintances from 1 to 5 on each of 12 bipolar constructs. Adams-Webber found that participants used different constructs independently in rating others correlating positively with their degree of confidence in their self-evaluations across the same constructs.

Internally Imposed Constructs and Level of Assignment

Research on the nature of personal construct theory as it relates to internally imposed constructs and level of assignment was found within education in the United States. The findings are included for consideration since this study questioned whether patterns in the data collected suggested differences related to level of assignment.

Lambert (1997) administered the Repertory Grid test to 189 administrators, teachers, and parents as part of an evaluation of Head Start programs throughout the United States.

Lambert found that Repertory Grid test methodology turned out to be an invaluable measurement and interviewing tool in uncovering the internal processes behind the connections and insights respondents made relative to their personally meaningful perceptions and values.

Lane (1995) suggested that intentions are structured in patterns of thinking in educational administration. Lane applied Kelly's theory of personal constructs to the framework that exists in principals, teachers, and theorists that forms the basis for subsequent action. Kelly's scientist metaphor was again mirrored in Lane's finding that the development of constructs proceeds by the formation of hypotheses from an idea or theory that is tested against reality. Lane amplified this metaphor by stating that constructs are artifacts since theories are "...purposeful inventions" (p. 70).

Internally Imposed Constructs and Professional Development

Research on the nature of personal construct theory as it relates to internally imposed constructs and professional development was found within education in countries other than the United States. The findings are offered to provoke consideration of optional applications. Incorporating personal construct theory and methodology to

teacher professional development has been attempted by several researchers with implications for professional development of educational leaders. In Canada, Oberg (1986) discovered ways for teacher educators to understand personal construct theory in relation to teacher professional development. Oberg found that reflecting on practice by using the interpretive framework of the Repertory Grid test enlarged teachers' awareness of their own practice and increased their capacity to practice more effectively. The use of the Repertory Grid test was examined as a tool to encourage reflection of teachers and professionals in early education by Menmuir and Christie, a team from Glasgow (1999). Findings from their study indicated that the completed Repertory Grid test provided a focus for reflective written commentary and informal group discussions.

Bodycott, Walker, and Lee (2001) analyzed pre-service teacher beliefs about principals in Hong Kong through the creative combination of personal construct theory methodology and storying techniques. This combined approach was supported by Hermans (2002) who recommended extending of Repertory Grid test results as an approach to inquiry to form a basis for storytelling to promote reflection of practice in a non-judgmental way. Using this combined approach, Bodycott, Walker, and Lee's study revealed a positive association between the leadership and management style of the principal and the participant's mothers with a negative association between principals and the interpersonal relationship participants had with their fathers. Diamond (1988) used the Repertory Grid test with teachers and then followed up with workshops led by teacher-educators that were designed to explore results from the grid in a conversational mode. This concept was intriguing in that the results from the grid served as the basis for conversation during the workshop to promote participants to take responsibility for the

content and the meaning of the grid results related to practice. Results like these indicate that personal construct theory techniques can serve to guide the reforms that are needed in the course design of teacher education, teacher induction, and programs of professional development of principals.

The popularity of personal construct theory as it relates to education is greater in the United Kingdom largely due to the personal efforts of a handful of individuals. Fransella (1988) compiled a collection of papers loosely related to the educational interpretation of personal construct theory in an attempt to invoke the assimilation of Kellyan thought into teaching methodology. Pope and Denicolo (2001) enthusiastically suggested that education could be transformed through the application of Kelly's theory and Repertory Grid test methods. Efforts to resuscitate Kelly's theory by breathing it into educational bodies of thought have been attempted by a few people with their endeavors discounted in favor of more conventional models. It is by developing a thorough understanding of personal construct theory and methodology that the following researchers have applied it to diverse issues on a global scale with significant results.

Internally Imposed Constructs and Non-Educational Settings

Research on the nature of personal construct theory as it relates to internally imposed constructs in non-educational settings is presented to provoke consideration of their application to education. Kellyan thought applied to the connections and insights of leaders is an area that borrows heavily from subjects in sample populations from the corporate world. Results from this research suggest the application of related research in educational leadership.

Hershfield-Verberg (1992) presented data gathered from the Repertory Grid test in research on the decentralization of organizations. The focus of her research was the constructivist perspective and Kelly's (1955) personal construct theory relative to large work groups. Her findings uncovered a growing relationship between process effectiveness and individual potency within large work groups.

Eden (1984) and Jones (2001) found that attempts to refine and build on personal construct theory were a way to guide problem-solving activities in organizations. Their variation of the Repertory Grid test incorporated post-cards on which constructs were written; players placed the cards that related to one another as if they were playing dominos to define the problem. Eden and Jones discovered that this type of construct game was a way for individuals in organizations to make sense of the problem as well as anticipate consequences in a group approach.

Boxer (1988) offered a provocative way to look at how managers gave structure to unstructured problems by using the Repertory Grid test in reflective analysis through conversational grid methodology with engineers at British Airways. He suggested that business is "...a tangle of conversations which have formed into a knot." (p. 420) and that "...the knot can be thought of as the particular way in which the conversations come together. They are the history which business is to those who are in its employ. The knot in this sense is the explanation which governs who can make choices when, where, and how about what kinds of things and the struggle amid senior management to cut this regnant knot." (p. 421).

Arnold and Nicholson (1991) examined personal change and stability in the early stages of careers with a multinational corporation. Their study used the Repertory Grid

test to determine how recent graduates construed themselves and others. Findings cast light on the graduates' concepts of self relative to others in their workplace and how these concepts can change. Arnold and Nicholson discovered that graduates who had positive self-concepts in the early stage of their careers did not become more positive over the course of time and that organizational socialization did not impact everyone in the same ways.

Buckenham (1998) claimed that the use of personal construct psychology could assist in understanding the changes in individuals as they become socialized to the workplace. Buckenham added that personal construct methodology could be implemented to address socialization as well as other professional development needs that individuals experience throughout their careers.

The power of grid conversations to promote personal change was endorsed in a study done by Thomas and Harri-Augstein (1988). Conversational grid methodology facilitated the representation of personal experiences in ways that enabled reflection, exchange, and effective transformations of the quality of personal learning. Kelly's personal scientist metaphor was transformed into the "conversational scientist who engages in creative levels of encounter which can only be valued from a perspective which evolves out of the event itself." (p. 99).

The second part of this review presented research on the nature of personal construct theory as it relates to internally imposed constructs of leadership behavior and internal expectations as differentiated by gender and level of assignment. Additional literature was reviewed in the areas of professional development and non-educational settings to provoke consideration of optional applications. Principals internally impose

well developed personal constructs based on an abundance of knowledge constructed from a lifetime of personal and professional events. The internally imposed personal constructs that enable principals to ascribe meaning to their leadership behavior were described by Kelly (1955) as the “transparent patterns or templates which he (man) [sic] creates and then attempts to fit over the realities of which the world is composed” (pp. 8-9). The next section summarizes literature on the Repertory Grid test, a technique developed by Kelly intended to reveal the personal constructs of the individual.

Repertory Grid

The Repertory Grid test was designed as a diagnostic, self-discovery, and research tool (Kelly, 1955). Kelly designed the Repertory Grid test with the assumption that a mathematical relationship existed between an individual’s judgments and the psychological assumptions reflecting their judgments. Methodologically, Kelly designed the Repertory Grid test as an alternative to the renowned concept-formation test. In the Repertory Grid test, Kelly (1955) suggested that the participant be given a role title list and asked to respond by designating, by name or otherwise, the personal identities of the people in his own world who fit the role. Their responses constituted the elements. Once the elements were identified, constructs were elicited through triadic analysis by asking the participant to tell more about three people at a time, “Now I would like you to tell me something about these three people. In what important way are two of them alike but different from the third?” (p. 222). Kelly recommended eliciting constructs in triads; the individual is asked whether two out of three people are alike in some important way that distinguishes them from the third person. When a decision is made, the individual marks the grid in the two areas corresponding to the two people who are alike with no

demarcation for the third person and writes a brief statement indicating how the two are alike.

Daniels and Holst (1996) studied the relationship between socio-institutional structures and individual thinking. Constructs of school behavior were elicited using the triadic presentation technique derived from personal construct analysis (Bannister & Fransella, 1986). Qualitative data reduction and portrayal procedures was used to analyze the construct data (Miles & Huberman, 1984) in terms of pedagogic context of elicitation, gender of participant, and features of the coding of the institution. Daniels and Holst described their methodology in the following excerpt:

Classes of 13-14 year-olds were identified within each school. Teachers and pupils were asked to rank pupils in terms of 'how acceptable they are' to them. On the basis of these rankings pupils were identified to act as elements in personal construct interviews. Triads of elements which revealed contrasts between *acceptable* and *unacceptable* pupils were constructed for each class. The triad combinations were balanced in terms of gender with a ratio of 2:1:1 in mixed, all male, and all female combinations. These triads were used to elicit constructs from teachers for each class. The standard question used to elicit data from the triad presentation was: "What do you think is the same about these two and different about this one?" The personal construct interviews were conducted using two prompts for each participant with each triad. One was referenced to the participant's own perceptions of similarities and differences between elements in the triad; the other was referenced to pupils' views in the case of teacher participants and teachers' views in the case of pupil participants. (Cf. "What do you think that your teacher would think was the same about these two and different about this one?" and "What do you think that your pupils would think was the same about these two and different about this one?") In this way the perceptions of actors of the processes of transmission were open to scrutiny. Equal numbers of male and female pupils were interviewed. Additional interviews were conducted with any pupils whose acceptability ranking was seen to differ markedly between pupils and teachers. (p. 70).

Bodycott (1997) employed the personal construct interview, completion of a Repertory Grid test (Kelly, 1955), follow-up interviews, and written recounts in a study on the influence that personal history can exert on the developing cognition of preservice

teachers. Bodycott described his procedure in the following excerpt:

The first step in this phase was to identify the elements or individuals who were to be compared. A common set of sixteen elements was derived from the study of Diamond (1985), and consultations with academic staff and professionals from each of the cultural groups. The elements were presented in randomly derived lists of triads, and participants were asked to distinguish two elements from the third. Participants responded through the elicitation of personal anecdotes and re-counts of past experience. It was from these that personal constructs or views of the ideal language teacher were derived. The sample size was deliberately kept small to enable an in-depth examination of data and the related methods of elicitation. Once the constructs were elicited, preservice teachers rated each element on a scale of one to seven, defined by each elicited construct pole. Ratings and subsequent cluster analyses were undertaken using the FOCUS (Shaw & Thomas, 1978) computer software program. Clusters provided the basis for analyzing relationships between elements, a procedure specifically related to the second objective of the study. Data for each preservice language teacher were recorded in case-study reports and explored using a constant comparative method of analysis (Glaser & Strauss, 1967). Checks on the reliability of interpretative reconstructions of individual data were undertaken by returning the case reports to the respective preservice teachers for verification and comment. Subsequent analysis involved cross-case analysis of mother tongue groups and inter-cultural comparisons. Reliability checks on data collection and analysis were undertaken by two independent people familiar with the techniques and general coding procedures. (p. 58).

Findings revealed the profound influence that mothers had on shaping the core constructs of the preservice teachers who participated in this study (Bodycott, 1997).

According to Kelly (1955), core constructs form the basis on which all humans filter and validate life experiences and change in core constructs is very difficult. Bodycott concluded that the close association with mothers, and to a lesser extent with fathers, indicated that years of exposure of preservice teachers in formal education contexts had only validated core views established during initial learning. In response to his findings, Bodycott affirmed that changing or developing preservice teachers' views was a difficult task.

Laddering is the process developed by Kelly where the researcher attempts to get

closer to the person's core values and preferences through questions such as, "Why is that an important distinction to make about the elements?" or "Which end of the pole do you prefer?". Daniels and Holst (1996) referred to the use of laddering as prompts in the personal construct interviews they conducted. In responding, the participant is asked to describe the similarities and differences using a single word or short phrase. Kelly (1955, p. 138) defined the emergent pole as that which embraces most of the immediately perceived context and the implicit pole as one which contrasts with the emergent pole. When the triadic analysis method is used, the maximum number of constructs will be less than or equal to 3. Constructs are not duplicated; if both poles of two constructs match, the participant is asked to think of a different construct. Kelly acknowledged that some of the constructs are situational rather than social or psychological with applications applied in an abstract manner. The two responses that were alike indicated the similarity pole construct while the one response that was different indicated the contrast pole construct.

There have been numerous variations of the Repertory Grid test to allow for flexibility; Kelly challenged researchers to pursue the continuous discovery of applications. The Repertory Grid test is a version of the role construct repertory test with role titles listed along one axis and personal constructs listed along the other, forming the grid. Within the grid, each intersection of row and column represents a cell in which the participant can place a check or not to designate whether their construct applies to this role title. Boeree (1997) described the Repertory Grid test as a process through which a picture is created by the people themselves of their view of reality.

Kelly (1955) originally used the term consistency rather than reliability to discuss the results of preliminary studies using the Repertory Grid test, believing that was more

important to be consistent than reliable when testing people. Results from original studies among hospital patients indicated an average percent of agreement in constructs used on two occasions: sixty-nine percent with a standard deviation of six (p. 232). Another original study that included college students yielded an average percent of agreement in constructs used on one occasion: seventy percent with a standard deviation less than eight (p. 232). Software programs today can now perform extensive statistical analyses of the findings from Kelly's original studies.

Computerized programs have been designed to create and facilitate every aspect of the Repertory Grid test from construct elicitation to univariate and multivariate statistical analysis of data. The most recent software available, Idiogrid, allows for Repertory Grid tests "...to be transformed, manipulated, merged, and subjected to a host of statistical analysis (Grice, 2002, p. 338). Grice claimed that Idiogrid software was able to manage large amounts of data; it can analyze up to 200 grids with an axis of up to 12 constructs and another axis of up to 12 elements. This capacity could prove very beneficial when studying large groups where individual grids must be compared, merged, and contrasted.

Kelly (1955) proposed six assumptions that should be considered in interpreting the results of the Repertory Grid test:

1. The first assumption is that of the permeability of the constructs elicited (p. 229).
The constructs verbalized can be applied to people and events which have not yet been confronted; elicited constructs are permeable.
2. The second assumption is that preexisting constructs are elicited by the test (p. 229-230). A degree of permanence is assumed in the constructs elicited; the

constructs are not fabricated in the response.

3. The third assumption is that of the representativeness of the elements (p. 230).
The participant's responses represent people with whom the participant relates to in their self-constructed role.
4. The fourth assumption is that constructs will be elicited which subsume, in part, the construction systems of the element figures (p. 230). Responses indicate that the participant understands, right or wrong, the way other people look at things.
5. The fifth assumption is that of the role regnancy of the constructs elicited (p. 230).
Unless the participant dissociates his identity from the people in the responses, it should be assumed that the constructs elicited are regnant over the participant's own role.
6. The sixth assumption is that of the functional communicability of the constructs elicited (p. 231). The participant responds in ways that can be understood to allow for organization of responses.

Niemeyer, Niemeyer, Hagans, and Van Brunt (2002) cautioned researchers to remain true to the original techniques of the Repertory Grid test to ensure valid findings in the construct systems. Since its inception, the Repertory Grid test has suffered many modifications and adaptations in construct system analysis which have contributed to what Niemeyer et al. referred "...as madness in our method." (p. 197). Fransella, Jones, and Watson (1988) suggested that all idiographic research relied on the skills of the researcher to elicit, ladder, combine, and regroup personal constructs to design approximations of Repertory Grid test that provided data necessary to answer specific questions, analyze data, and interpret results. Eden (1984) believed that too much

cleverness and not enough common sense were involved in grid analysis (p. 790). According to Eden, the purpose of the Repertory Grid test was not to prescribe but merely to provide analysis about aspects of a decision. Her statement supports the application of this technique for exploring the leadership behavior of principals where therapy is not sought; it is analysis of decisions that is required.

The third part of this review presented research on the Repertory Grid technique to establish the validity of applying Kelly's methodology to explore the meaning principals ascribe to their leadership behavior. The Repertory Grid test used in this study was a form of the role construct repertory test with elements listed along one axis and personal constructs listed along the other, forming a grid that, according to Kelly, would look beyond the words describing personal constructs (Fransella & Bannister, 1977). In this study, the Repertory Grid test represented a process through which a picture was created by the principals themselves of their view of reality (Boeree, 1997). The next section presents a summary and conclusions drawn from the literature.

Summary and Conclusions Drawn from the Literature

The importance of studying the leadership behavior of the principal cannot be overemphasized. Principals, key actors in the school district, play a significant role in accomplishing district goals. Recent questions related to such issues as supply and demand, principal competence, and school performance based on test scores make it imperative for school districts to be relatively certain that the principals who lead the nation's schools are performing successfully.

Numerous leadership descriptions, characteristics, and behaviors have emerged from studies attempting to identify predictors of leadership success. Although the

progress made in identifying characteristics and behaviors is encouraging, it remains necessary for the focused attention on principal leadership to go beyond descriptive studies to seek the meaning that principals ascribe to their thoughts, words, and actions (Krug, Ahadi, & Scott, 1990). By exploring the transparent templates which principals create and attempt to fit over the realities of their world, the well developed personal constructs that govern their leadership behavior may provide a more profound explanation of principal leadership.

Historically, personal construct theory has survived in the scientific realm of psychology with limited forays into the educational landscape. While there are studies that relate directly or indirectly to the leadership behavior of principals, no previous study had focused exclusively on the exploration of the internally imposed personal constructs principals build in anticipation of their leadership behavior relative to externally imposed descriptions and expectations. Kelly (1955) suggested that there was little difference between what went on in education and therapy: "...the functions of group psychotherapy are broadly the same of those of any form of psychotherapy: to assist the person to develop more effective channels through which he and others may anticipate events." (p. 1155). Kelly's thought applied to the connections and insights of leaders is an area that borrows heavily from studies that sample populations from disciplines other than education. Significant results from this study could enlighten the educational researcher to the application of transferable ideas in relation to research in educational leadership. The study outlined in the next chapter will be an attempt to determine if resuscitating Kelly's personal construct theory for use in the body of education can bring new life to research in educational leadership.

CHAPTER THREE

METHODOLOGY

The main purpose of this study was to discover the meaning that principals ascribe to their leadership behavior in anticipation and interpretation of events through a process designed by Kelly (1955) to reveal how individuals ascribe meaning to their behavior. A secondary purpose was to determine if there were patterns in the data that suggested differences related to gender and level of assignment.

In this chapter, the research context, research assumptions, study participants, participant biographies, instruments used in data collection, procedures used, and method of analysis of the data are described.

Research Context

The study took place in 16 public schools located within the School District of Lee County in southwest Florida. The research activities covered a 3-month period, from May 10, 2005, to August 10, 2005. The timing of the research activities was specifically designed to take advantage of the less hectic summer months when principals may have more time available.

Lee County's population in 2005 was 475,000 permanent residents with a substantial influx of tourists during the winter months. The population grew at a rapid rate making Lee County distinct from other urban areas in the United States. According to the district's website, the School District of Lee County was the 60th largest school district in the United States educating over 70,000 students with a total budget of

\$1,324,882,867 for the 2004-2005 school year. The School District of Lee County was the county's largest employer with over 9,900 employees. The district was also the area's largest builder with an extensive construction program to build new schools and renovate existing buildings.

In 2005, school registration in Lee County occurred in a unique process. The school district consisted of three main zones: east, south, and west. The residential address of the students placed them in a zone and students could attend any of the schools within the zone in which they resided or attend a multi-zone magnet school. Parents chose the school they wanted their child to attend; student assignment depended on availability of openings in the school of choice. If a desired school did not have openings, the student was placed on a waiting list at that school and the parent made alternate choices until placement was secured. In 2004-2005, the number of students served at each level consisted of 32,015 elementary; 16,468 middle; 20,400 high; 1,257 pre-k; and 642 high tech post secondary students. The number of schools at each level included thirty-five elementary schools; fourteen middle schools; nine high schools; seven special centers; two high tech centers; four K-8th grade schools; one 6-12th grade school; three alternative schools; and seven charter schools. The ethnic composition of the student body was represented by 41,057 Caucasian; 9,969 African American; 15,590 Hispanic; 972 Asian; 249 Indian; 2,285 Multiracial. The gender composition of the student body was 36,101 males and 34,030 females.

Research Assumptions

It was assumed that the participants in this study would answer honestly and candidly. It was also assumed that data from the full context elicitation, laddering, triadic

analysis, and full grid analysis would validly and reliably collect the participant's responses, that information provided by participants involved in the study would be accurate, and that the perceptions of the participants would relate to current practice.

Study Participants

Seventy-one principals in the School District of Lee County were invited to voluntarily participate in the study through a combination of email and phone call solicitation from May 10, 2005 to June 3, 2005. The individuals contacted by the researcher included all persons who were a full-time administrative staff member officially recognized by the state of Florida through certification in educational leadership, assigned to one school, responsible for leadership at their school of assignment, and recognized as principals by the School District of Lee County during the time period of solicitation. Florida's licensing rules in 2005 required candidates for certification in educational leadership to have taught for a minimum of three years, earned a master's degree or higher, and completed training in specified areas such as management, education law, and curriculum and instruction (Archer, 2002). Challenges in securing voluntary participation in the study required criteria for selection of principals to be modified from principals with more than five years of experience as an administrator, represent elementary and secondary levels of assignment, equally represent gender, and a record devoid of disciplinary action to principals with more than five years of experience as an administrator, represent elementary and secondary levels of assignment, unequally represent gender, and a record devoid of disciplinary action.

The study participants included sixteen principals who voluntarily responded to participant solicitation in the form of emails and telephone calls. In the initial participant

solicitation email, the researcher provided an overview of the study and invited the principals to participate in two interviews, each approximately one hour in length. In the follow-up interview request email, the researcher briefly referenced the initial invitation to participate and asked for a response regarding voluntary participation. Telephone calls were also made to all prospective participants. None of the principal accepted the initial telephone calls from the researcher, and none of the principals replied to detailed messages left with the principals' secretaries in response to study participation. Two secretaries requested study information be sent to their personal email address for personal review; no response was received from the principals of these secretaries despite additional effort on the part of the researcher.

Nine male and seven female principals agreed to participate (see Table 1). Participant solicitation responses were presented relative to gender and level of assignment to address the research questions that proposed patterns in the data that suggested differences related to gender and level of assignment. For ethical reasons, responses were coded in non-identifying ways.

Table 1
Participant Solicitation Response

Level of Assignment	Principals Contacted	Principals that Responded	Principals that Did Not Respond	Principals that Agreed to Participate
<u>Elementary</u>				
Total	43	28	15	10
Male	16	11	5	5
Female	27	17	10	5
<u>Middle</u>				
Total	16	9	7	4
Male	8	5	3	2
Female	8	4	4	2
<u>High</u>				
Total	12	7	5	2
Male	10	6	4	2
Female	2	1	1	0

Instruments Used in Data Collection

Kelly's (1955) personal construct interview and the Repertory Grid test were used in the data collection process. The validity and reliability of Kelly's personal construct methodology has been established in numerous studies since its inception. Personal construct theory was conceived on Kelly's (1955) belief that people constructed reality with anticipation or expectation just like scientists construct theory with assumptions or hypotheses and engaged in behaviors to test their anticipations or expectations the way scientists conducted experiments to adjust their theories to fit the facts. Kelly designed the Repertory Grid test to be used as an instrument to measure personal constructs statistically. The Repertory Grid test is a form of the role construct repertory test with

role titles listed along one axis and personal constructs listed along the other, forming a grid that, according to Kelly, would look beyond the words describing personal constructs (Fransella & Bannister, 1977). Within the grid, each intersection of row and column represents a cell in which the subject can place a check or not to designate whether their construct applies to this role title.

Kelly acknowledged that some of the constructs were situational rather than social or psychological with applications applied in an abstract manner. Fransella and Bannister (1977) suggested scoring grid responses manually or by visually analyzing the matrix of matching scores to discover which construct is most highly matched with all other constructs and which elements is most highly matched with other elements. When analyzing detailed information such as factor structure or when analyzing a large number of grids, Fransella and Bannister recommended computers. Computerized software programs have been designed to create and facilitate every aspect of each variation of the Repertory Grid test from construct elicitation to univariate and multivariate statistical analysis of data. The most recent software available, Idiogrid, allows for Repertory Grid tests "...to be transformed, manipulated, merged, and subjected to a host of statistical analysis (Grice, 2002, p. 338). Grice claimed that Idiogrid software was able to manage large amounts of data; this software can analyze up to 200 grids with an axis of up to 12 constructs and another axis of up to 12 elements. The capacity of the Idiogrid software has proven to be very beneficial when individual grids must be compared, merged, and contrasted.

Procedures Used in the Interviews

In carrying out the research design, several specific procedures were used. In the first audio-taped interview conducted in each participant's office at their school of assignment, data were collected through full context elicitation, laddering, and triadic analysis (Kelly, 1955). The first interview began with engaging the participant in a conversation using the participant biography designed by the researcher to increase the comfort level and familiarity between the researcher and the participant.

Procedures Used in First Interview

Full Context Elicitation

In a procedure referred to as full context elicitation, a set of cards was then placed in front of the principal, with the elements representing the Florida Principal Competencies (Appendixes H-J) printed on each card. The technique of laddering was applied to elicit the participant's identification of bipolar personal constructs in which elements were presented and analyzed in a triadic approach.

Laddering

The technique of laddering was applied to elicit the participant's identification of bipolar personal constructs in which elements were presented in a triadic approach. The participant was asked to describe the similarities and differences using a single word or short phrase. Kelly (1955, p. 138) defined the emergent pole as that which embraces most of the immediately perceived context and the implicit pole as one which contrasts with the emergent pole. When the triadic analysis method is used, the maximum number of constructs will be less than or equal to 3. Constructs were not duplicated; if both poles of

two constructs matched, the participant was asked to think of a different construct.

Triadic Analysis

The participants then compared and contrasted the elements by explaining their expression of meaning in three areas: a clear contrast, appropriate detail, and a clear relationship to the topic (Jankowicz, 2004). Kelly's principle in triadic analysis for personal construct elicitation was that people do not define good without a corresponding definition of evil. The estimated amount of time for the first interview was one and one half hours.

Procedure Used in Second Interview

Full Grid Completion

In the second interview, each participant completed one Repertory Grid test designed by the researcher that incorporated the Florida Principal Competencies (Appendixes H-J) as the elements and the principals' bipolar personal constructs that analysis found to be most representative. The participants were asked to examine the scale that ranges from emergent constructs to implicit constructs and rate each element according to the set of constructs on the scale to represent what they think about each element in terms of their leadership behavior. The participants rated each element on each of the constructs using a 7-point bipolar rating scale ranging from +3 to -3 to represent what they thought about each element in terms of their leadership behavior (Table 2). The participant was asked to rate all *does not apply* responses or constructs without responses with 0 (Kelly, 1955, p. 271-272) so that missing values did not result in the deletion of a large number of constructs from several analyses conducted using Idiogrid

software (Grice, 2002). The participants were instructed to make a rating and then move on to the next set of constructs until they rated all pairs of constructs relative to each element. The estimated amount of time for the second interview was one hour.

Table 2
Options for Rating

Value	Label
+3	Very Desirable
+2	Desirable
+1	Fairly Desirable
0	Does not apply
-1	Less Desirable
-2	Not Desirable
-3	Strongly Not Desirable

In the original study design, two Repertory Grid tests, self and ideal self, were to be completed by each participant. At the conclusion of the first interviews, the researcher discussed the second interview format with each participant so they would know what to anticipate. The responses of the participants regarding the completion of two Repertory Grid tests implied that there may be possible confusion in completing two grids. Their responses forced the researcher to question why the completion of two Repertory Grids in the second interview. When the study was originally designed, the researcher had questioned whether the participants would be forthcoming during the interviews. Once the study was initiated, it was discovered that the participants were very open and

comprehensive in the information they shared. Their responses led the researcher to believe that the participants would candidly complete one Repertory Grid test: self.

Before abandoning the original idea of asking participants to complete two Repertory Grid tests in the second interview, the researcher analyzed two completed Repertory Grid tests: self and ideal self. The descriptive statistics did not indicate a significant difference between the two Repertory Grid tests analyzed. These results supported the elimination of the two Repertory Grid test completion to avoid collecting meaningless data as well as creating a potentially confusing activity for the participants. By focusing on the completion of one Repertory Grid test in the second interview, the researcher was able to design one Repertory Grid that included more constructs and create an activity that was more conducive to participant completion of one grid in a meaningful way.

Analysis of Data

The data were analyzed using the following strategies:

1. The audio taped data were reduced through interview transcription to identify the responses the participants used frequently throughout the full context elicitation.
2. Transcripts were read to tentatively identify categories of responses and classify responses for tallying.
3. Final categories were determined for tallying of responses. As a result, one Repertory Grid test was designed by the researcher incorporating the highest tallied responses to exemplify the participants' elicited bipolar constructs.

The data collected in this study were analyzed using Idiogrid software (Grice,

2002) to provide examination of responses and manage data throughout analysis. All data were organized in spreadsheets that dealt with textual as well as numeric data in a structured way to allow for easy access to clarify Repertory Grid technique. This provided options to change coding and make other adjustments where it was necessary so that results could be reported in an ethical manner.

To address research question one, descriptive statistics were computed for the elicited constructs and for summarizing grid data to describe the characteristics of each grid. An Extremity in Ratings Analysis was also conducted to provide insights into construct and element extremities for each participant. An Extremity of Ratings Analysis simply tallies the frequencies for a rating of +3 for each construct and element to illustrate extremities. High percentages in the Extremity in Ratings Analysis ratings led to assumptions related to the constructs and elements that participant's used in their transparent templates.

To address research questions two and three, each grid was decomposed into different sources of variation using a Generalized Procrustes Analysis format to develop consensus grids for gender and level of assignment by computing the ratings for the constructs and elements. The Generalized Procrustes Analysis identified trends in the data as well as areas of agreement by describing the variability in the scaled, rotated grids in an Analysis of Variance (ANOVA) form. The Generalized Procrustes Analysis automatically scales all of the grid values so that their total sum of squares equals some value; the default value of the sum of squares in Idiogrid software is equal to 100 (Grice, 2002). When set to 100, most of the values in the ANOVA output can be interpreted as percentages of the total variation among the grids. Having the ANOVA output scaled in

this manner enhances the interpretation of the results and facilitates comparing results across grids. To achieve this scaling, Idiogrid software computes a value referred to as the Lambda Scaling Factor in which every value in each grid is then multiplied by Lambda prior to the analysis so that the total sum of squares for the grids will equal the Total Sum of Squares Value set by the default of 100. When the analysis is completed, the values are then divided by Lambda.

A Principal Components Analysis was then conducted on the results from the Generalized Procrustes Analysis to identify correlations related to gender and level of assignment. At the conclusion of the study, each participant received an individualized analysis that included a graphic display of ratings, descriptive statistics, and a narrative summarizing the findings of the study.

Summary

This chapter explained the methods used in this qualitative study to explore the transparent templates of principals and determine if there were patterns in the data that suggested differences related to gender and level of assignment. It should be emphasized that the study organized all data in spreadsheets that dealt with textual as well as numeric data in a structured way to allow for easy access to clarify Repertory Grid test results. This provided options to change coding and make other adjustments where it was necessary so that results could be reported in an ethical manner. The next chapter presents the results obtained with these methods.

CHAPTER FOUR

FINDINGS

As stated in Chapter One, the study intended to go beyond externally imposed descriptions of the leadership behavior of principals, exploring their personal constructs to discover the meaning that principals ascribe to their leadership behavior. Additionally, patterns in the data were examined to determine if there were differences related to gender and level of assignment. This chapter is organized in terms of the three specific research questions posed in Chapter One. First, the transparent templates of principals are reported to address research question one. Next, the data were examined for patterns in differences related to gender and level of assignment to address research questions two and three. Each research question is stated, a content analysis highlights significant patterns in the findings, and the related analyses are depicted. Participants' names are fictitious and coded in non-identifying ways in the analyses to maintain confidentiality.

The study was carried out as designed; however, the following aspects of the procedures used to obtain results were noted. The first interviews were originally scheduled for approximately one hour in duration. The average length of the first interviews was one hour with the shortest interview lasting forty-five minutes and the longest interview lasting one hour and thirty minutes. Each first interview began with a participant biography and proceeded to construct elicitation. The researcher was sensitive to verbal and non-verbal cues from each participant in adjusting the duration of the first interview. All participants actively engaged in using the element cards in positive ways that empowered them to control the flow and direction of the construct elicitation. In

instances of redirection, the participants used the element cards to assist them in comparing and contrasting elements. In all instances participants engaged in the elicitation as directed and understood the directives during the first interview. Each construct elicitation was conducted according to design and completed in a manner that thoroughly addressed the desired level of data collection by the researcher. Following construct elicitation activity, without researcher directive, each participant independently summarized the activity by rating or categorizing the competencies in ways that directly correlated with their responses during construct elicitation.

In the area of interview preparation, there were significant differences in the performance between the principals who had, and had not, reviewed the Florida Principal Competencies (Appendixes H-J) prior to the first interview. Principal M6, Principal F2E7 and Principal M2E2 stated that they had not reviewed the competencies the researcher had emailed to assist them in preparing for the first interview. Principal M5E5, Principal F3E8, Principal F1E6, Principal M9H2, and Principal M1E1 had reviewed the competencies and had printed out a copy which they referenced throughout the first interview. Principal F4E9, Principal F6M3, Principal M8H1, Principal M7M2, Principal M4E4, Principal F5E10, Principal F6M3, and Principal F7M4 did not comment on their level of preparation for the interview. Principals who had reviewed the competencies were more likely to engage in the construct elicitation as directed and remain focused on the competencies during construct elicitation. Principals who had not reviewed the competencies were more likely to not engage in the construct elicitation as directed and require frequent redirection to stay focused on the elicitation of constructs.

The second interviews were originally scheduled for approximately one hour in

duration. The average length of the second interviews was one half hour with the shortest interview lasting fifteen minutes and the longest interview lasting forty-five minutes. In the second interviews, the researcher presented the participant with the Repertory Grid test and options for rating. All participants actively engaged in rating themselves with minimal assistance or interruption after receiving the initial directives. The researcher was present throughout the entire second interview to answer questions from participants. The average number of questions was three and related to construct clarification such as, “What is meant by time autonomy as it relates to curriculum?” The researcher responded in non-judgmental ways to clarify the context of the construct without providing information to the participant that would influence their rating. In every instance, participants took at least one break during the Repertory Grid completion to check email, answer the phone, or to walk around the room. The researcher said nothing during these breaks, and, in each instance, the participant returned voluntarily to complete the Repertory Grid. It was observed that the participants’ demeanor was focused and intense throughout the Repertory Grid completion. Four of the participants commented that the Repertory Grid completion “...was hard.” When they were asked to clarify what they meant by this comment, their response were that the completion “...makes you think.” Two of the participants mentioned that their responses could be influenced by the situation and gave the example that sometimes it is very desirable for principals to be communicative with personnel and sometimes it is not desirable. When the participants were asked to expound on their thoughts during rating, they explained that during the Repertory Grid completion they responded philosophically rather than thinking about a specific situation. There were no instances in which any participant could not engage in

the Repertory Grid test completion as directed, chose not to engage in the Repertory Grid test completion as directed, or did not understand the directives and answers to questions during the second interview. Each Repertory Grid test completion was conducted according to design and in a manner that thoroughly addressed the desired level of data collection by the researcher.

Research Question One

Research question one asked: What are the transparent templates principals create and attempt to fit over the realities of which their world is composed? To address research question one, data collected during the two interviews are presented in a manner that follows the sequence of procedures used in the interviews.

During the first interview, data from the participant biographies were collected to promote familiarity and personify each principal. Then, during the full context elicitation data were collected that explored the principals' constructs in relation to each element. Comments made during the full context elicitation are presented to reveal highlights in the conversations that evolved.

During the second interview, each participant completed a Repertory Grid. The completed grids are depicted followed by a summary. The summary includes an Extremity of Ratings Analysis to illustrate extreme responses by a tally of the frequencies for ratings of +3 for each construct and element. High percentages in the Extremity in Ratings Analysis led to assumptions related to the constructs and elements that participants used in their transparent templates. While an ideal grid would not necessarily contain all +3 ratings, the Extremity of Ratings Analysis indicates the specific areas each

participant rated as very desirable and provides another dimension to understand the findings.

The following information was voluntarily provided by each participant during the course of two interviews and offered a glimpse into the transparent templates of the ten elementary principals, four middle school principals, and two high school principals who participated in this study. To avoid compromises to privacy, more specific information on each participant is not presented.

Principal M1E1

During the first interview, a participant biography was conducted in which Principal M1E1 shared the following information:

Principal M1E1 was born in the southern region of the United States. Principal M1E1 had almost ten years of experience as an administrator with a bachelor's degree in education and a master's degree in administration. Principal M1E1 used the following high impact statements to describe personal strengths: driven; inquisitive; willing; and reflective. The following major achievements noted by Principal M1E1 were parenthood, attaining present educational level, opening a new school, and leading a high poverty school. The events that shaped or changed Principal M1E1's life were attending college, marriage, and years as a classroom teacher. Principal M1E1 believed that personnel are the heart and soul of the organization, the key to successful school operation. Principal M1E1 emphasized that each staff member has an equal responsibility and opportunity to shape the direction of the school.

During the full context elicitation, Principal M1E1 shared the following comments relative to each element:

- Curriculum: Curriculum was defined by Principal M1E1 as “what students know and are able to do. It is carried out by teachers and staff with a strong link to assessment.”
- Finance: Principal M1E1 stressed the importance of budget in “accomplishing goals and defined finance as a resource used in the best possible way to accomplish results.”
- Law: Principal M1E1 emphasized that “one should be mindful and respectful of the law while maintaining consistency in application.”
- Technology: Principal M1E1 believed that “technology generated excitement for learning, gave access to needed information, was a great educational and communication tool, and helped lessen the workload.”
- Leadership: Principal M1E1 stated that “leadership established the vision, the direction, the motivation, and the excitement.”
- Management: Principal M1E1 referred to management as “keeping the trains running and on schedule.”
- Personnel: Principal M1E1 defined personnel as “the heart and soul of the organization that shaped the direction of the whole school with each staff member having an equal responsibility and opportunity to shape that direction.”
- Communication: Principal M1E1 stressed that “communication must consist of clarity in the message, common understanding, and buy-in from everyone.”

During the second interview, each participant completed a Repertory Grid. Principal M1E1 displayed a positive attitude throughout the course of the two interviews; the all positive ratings in the completed Repertory Grid reflect the positive attitude that was

observed. Principal M1E1 shared construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant's Repertory Grid except in the area of finance which most often received a majority of *does not apply* ratings. Throughout the completion of the Repertory Grid, Principal M1E1 moved rapidly yet conscientiously through the ratings. An Extremity of Ratings Analysis of Principal M1E1's Repertory Grid indicated that Principal M1E1 rated highest in the constructs of communicative (87.5%), student oriented (62.5%), adaptive (75%), vision (75%), passion (75%), challenging (62.5%), inclusive (62.5%), cooperative (75%), resourceful (87.5%), potential (75%), persistence (75%), and change (75%) and the elements of technology (72.73%) and communication (72.73%).

Table 3 depicts Principal M1E1's completed Repertory Grid.

Table 3
Male Elementary School Principal (M1E1): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	3	3	2	3	3	3	3	3	Secretive
Democratic	2	0	0	1	1	1	1	0	Autocratic
Student-Oriented	3	0	2	3	2	3	3	3	Content-Oriented
Adaptive	3	0	0	3	3	3	3	3	Rigid
Vision-Big Picture	3	2	1	3	3	3	3	3	Myopic-Details
Delegate	0	0	0	2	2	2	1	1	Workaholic
Passion	3	0	0	3	3	3	3	3	Apathy
Challenging	3	0	0	3	3	3	3	2	Easy
School-Based	1	0	0	3	2	3	2	3	Downtown-Based
Seamless	3	0	0	3	0	3	2	3	Choppy
Spiritual	0	0	0	0	0	0	0	0	Secular
Multifaceted	3	0	0	2	1	3	2	3	Simple
Inclusive	3	0	3	3	2	1	3	3	Exclusive
Built	2	0	0	2	1	1	1	3	Mandated
Cooperative	3	0	2	3	3	3	3	3	Hindersome
Resourceful	3	0	3	3	3	3	3	3	Unimaginative
Empower	3	0	0	3	3	1	1	2	Weaken
Time Autonomy	1	0	0	1	1	1	1	1	Time Constraints
Fun	2	0	0	3	3	1	2	3	Boring
Potential	3	0	0	3	3	3	3	3	Actualized
Persistence	3	0	0	3	3	3	3	3	Lack of Persistence
Change	3	0	2	3	3	3	3	3	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal M2E2

During the first interview, a participant biography was conducted in which Principal M2E2 shared the following information:

Principal M2E2 was born in the midwestern region of the United States. Principal M2E2 had over twenty years of experience as an administrator with a bachelor's degree in elementary education, a master's degree in administration, and a specialist's degree in leadership. Principal M2E2 used the following high impact statements to describe personal strengths: out of the mainstream; out of the box; creative with finances; always looking for ways to reach kids; and creative with faculty. The following major achievements noted by Principal M2E2 were turning a rundown school with tremendous needs and a staff with low morale into a hub in the community with a dedicated staff and countless business partners who donate their services to the improvement of the school. The event that shaped or changed Principal M2E2's life was a natural disaster during the first year of assignment as principal that forced the community and the school to come together. Principal M2E2 hired people who share the same vision for the students and the school. Principal M2E2 actively solicited the financial resources of the community in the support of the school. Principal M2E2 believed in an open door policy for the school and especially, for the principal's office.

During the full context elicitation, Principal M2E2 shared the following comments relative to each element:

- Curriculum: Principal M2E2 believed that “curriculum must be understood and that educators must have a strong background in meeting students where they're at.”

- Finance: Principal M2E2 emphasized that “finance equates to constant begging for grants and resources.”
- Law: Principal M2E2 “didn’t spend too much time in the area of law preferring to redirect concerns downtown to the attention of school board attorneys or bringing in the police to handle disputes.”
- Technology: Principal M2E2 stated that “despite everything that was available, there was still no software available to teach low SES students how to read.”
- Leadership: Principal M2E2 emphasized that “leadership is very important and that the leader of the school must exhibit foresight and vision.”
- Management: Principal M2E2 equated management to leadership. Principal M2E2 additionally emphasized the “importance of managing finances.”
- Personnel: Principal M2E2 stated that “there is always someone who needs counseling.”
- Communication: Principal M2E2 stressed that “strong communication with faculty, students, and parents was most important.”

During the second interview, each participant completed a Repertory Grid. Principal M2E2 seemed more interested in showing the researcher artifacts and memorabilia throughout the course of the two interviews than in participating in the methodology. Principal M2E2 shared construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant’s Repertory Grid except in the area of finance which received a range of positive ratings despite comments that suggested the opposite. Throughout the completion of the Repertory Grid, Principal M2E2 appeared positive and confident about the ratings despite rapid

completion; the ratings were quickly marked across the top row with arrows running down each column through each construct. The exception was the area of finance in which Principal M2E2 responded to the redirection to spend some time addressing each construct cell individually. The researcher surmised that Principal M2E2 may view finance as a priority since the ratings in this area were the only ones on the Repertory Grid that were diverse. An Extremity of Ratings Analysis of Principal M2E2's Repertory Grid indicated that Principal M2E2 rated highest in the constructs of communicative (75%), democratic (75%), student-oriented (75%), adaptive (75%), vision (75%), delegate (75%), passion (75%), challenging (75%), school based (75%), built (75%), cooperative (75%), resourceful (75%), empower (75%), fun (75%), potential (75%), persistence (75%), and change (75%) and the elements of curriculum (100%), leadership (100%), management (100%), personnel (100%), and communication (100%).

Table 4 depicts Principal M2E2's completed Repertory Grid.

Table 4
Male Elementary School Principal (M2E2): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	3	3	0	0	3	3	3	3	Secretive
Democratic	3	3	0	0	3	3	3	3	Autocratic
Student-Oriented	3	3	0	0	3	3	3	3	Content-Oriented
Adaptive	3	3	0	0	3	3	3	3	Rigid
Vision-Big Picture	3	3	0	0	3	3	3	3	Myopic-Details
Delegate	3	3	0	0	3	3	3	3	Workaholic
Passion	3	3	0	0	3	3	3	3	Apathy
Challenging	3	3	0	0	3	3	3	3	Easy
School-Based	3	3	0	0	3	3	3	3	Downtown-Based
Seamless	3	0	0	0	3	3	3	3	Choppy
Spiritual	3	0	0	0	3	3	3	3	Secular
Multifaceted	3	0	0	0	3	3	3	3	Simple
Inclusive	3	0	0	0	3	3	3	3	Exclusive
Built	3	3	0	0	3	3	3	3	Mandated
Cooperative	3	3	0	0	3	3	3	3	Hindersome
Resourceful	3	3	0	0	3	3	3	3	Unimaginative
Empower	3	3	0	0	3	3	3	3	Weaken
Time Autonomy	3	2	0	0	3	3	3	3	Time Constraints
Fun	3	3	0	0	3	3	3	3	Boring
Potential	3	3	0	0	3	3	3	3	Actualized
Persistence	3	3	0	0	3	3	3	3	Lack of Persistence
Change	3	3	0	0	3	3	3	3	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal M3E3

During the first interview, a participant biography was conducted in which Principal M3E3 shared the following information:

Principal M3E3 was born in the southern region of the United States. Principal M3E3 had over six years of experience as an administrator with a bachelor's degree in education and a master's degree in administration. Principal M3E3 used the following high impact statements to describe personal strengths: highly motivated; loves kids; hard worker; empathetic; and enjoys life. The following major achievements noted by Principal M3E3 were becoming a principal; balancing personal and professional lives; and parenthood. The event that shaped or changed Principal M3E3's life was leaving a lucrative position in business to seek a feeling, caring job working with kids. Principal M3E3 stated a desire to attain buy-in from staff and believes in empowering them to be a part of the educational process. Principal M3E3 shared that the greatest source of stress was staff related, especially in the area of communication where it seemed the same conversation occurs with staff members in six different ways. Principal M3E3 acknowledged that by providing staff with more information, assumptions were being eliminated.

During the full context elicitation, Principal M3E3 shared the following comments relative to each element:

- Curriculum: Principal M3E3 believed that “staff should be empowered to be part of the process and have the resources they need for kids to be successful.”

Principal M3E3 shared that “there is not enough time in the day to spend on curriculum.”

- Finance: Principal M3E3 emphasized that “everything ties back to finance and that finance is an area in which the principal must follow guidelines, be responsible, and balance educational leadership with building management.”
- Law: Principal M3E3 identified custody issues and individual education plans as the two areas that are the “most pressing in terms of the law.” Principal M3E3 “doesn’t hesitate to pick up the phone and ask the District for support which is readily provided.”
- Technology: Principal M3E3 stated that “technology was impossible to keep up with, was frustrating, and yet manageable with the help of a great technology specialist.”
- Leadership: Principal M3E3 shared that “leadership was the most challenging aspect due to the diversity of people to lead.” Principal M3E3 stated that “a personal philosophy was to be true to self and one’s own leadership style while tweaking personal leadership style to fit those you serve.”
- Management: Principal M3E3 is assigned to an older building that “required so much time spent taking care of building concerns that curriculum has been impacted.”
- Personnel: Principal M3E3 emphasized that personnel “was the greatest source of stress with some of the stress originating from the system and some of the stress originating with individuals.” Principal M3E3 stated that “frequently there was the same conversation with one individual played out six different ways.”
- Communication: Principal M3E3 believed communication to be “most important.” Principal M3E3 strived to “eliminate assumptions by providing

individuals with information.” Principal M3E3 shared that “most problems were easily solved with good communication.”

During the second interview, each participant completed a Repertory Grid. Principal M3E3 appeared to be social and cooperative throughout the course of the two interviews. Principal M3E3 shared construct elaborations related to each element; these elaborations appeared to be consistent with the ratings on this participant’s Repertory Grid especially in the areas of communication and personnel. Principal M3E3 shared that communication and personnel were the two areas that present personal challenges. Throughout the completion of the Repertory Grid, Principal M3E3 played music and appeared relaxed yet focused. An Extremity of Ratings Analysis of Principal M3E3’s Repertory Grid indicated that Principal M3E3 rated highest in the constructs of communicative (50%), student oriented (62.5%), school based (75%), resourceful (75%), and potential (75%) and the element of leadership (63.64%).

Table 5 depicts Principal M3E3’s completed Repertory Grid.

Table 5
Male Elementary School Principal (M3E3): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	3	1	2	3	3	-1	2	3	Secretive
Democratic	3	-1	1	2	1	-2	1	2	Autocratic
Student-Oriented	3	3	3	3	3	1	0	1	Content-Oriented
Adaptive	2	0	1	2	3	1	1	2	Rigid
Vision-Big Picture	2	3	-1	1	3	2	2	3	Myopic-Details
Delegate	2	3	-1	1	3	2	2	3	Workaholic
Passion	-1	-1	-1	1	3	1	1	3	Apathy
Challenging	3	1	1	1	3	1	1	1	Easy
School-Based	3	3	2	3	3	3	3	2	Downtown-Based
Seamless	3	-1	2	1	3	1	3	1	Choppy
Spiritual	0	0	0	0	1	0	0	0	Secular
Multifaceted	1	0	2	1	3	1	1	1	Simple
Inclusive	-1	2	1	1	1	1	1	3	Exclusive
Built	1	1	0	1	1	1	1	1	Mandated
Cooperative	1	0	-1	2	2	3	2	3	Hindersome
Resourceful	3	3	-1	3	3	3	2	3	Unimaginative
Empower	1	1	1	1	3	3	1	2	Weaken
Time Autonomy	1	1	0	1	1	1	1	1	Time Constraints
Fun	1	0	1	3	2	3	2	2	Boring
Potential	3	3	1	3	3	3	1	3	Actualized
Persistence	2	0	0	1	3	2	1	3	Lack of Persistence
Change	1	1	2	-1	1	-1	-1	3	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal M4E4

During the first interview, a participant biography was conducted in which Principal M4E4 shared the following information:

Principal M4E4 was born in the northeastern region of the United States. Principal M4E4 had over twenty years of experience as an administrator with a bachelor's degree in education and a master's degree in administration. Principal M4E4 used the following high impact statements to describe personal strengths: child-centered; optimistic; outgoing; hardworking; family oriented; and dedicated. The following major achievements noted by Principal M4E4 were opening two new schools; receiving recognition as an outstanding administrator on several occasions; involvement in youth leagues; and working for the School District of Lee County for over thirty years. The event that shaped or changed Principal M4E4's life was moving to Florida as a young adult. The recent deaths of three immediate members of Principal M4E4's family forced a major change in priorities. During the past year there had been over two dozen deaths within the families of staff members at Principal M4E4's school of assignment. Principal M4E4 responded with full support and compassion in the form of completely depleting the substitute fund by allowing effected staff members to take as much time off as needed to grieve.

During the full context elicitation, Principal M4E4 shared the following comments relative to each element:

- Curriculum: Principal M4E4 believed curriculum was “the heart of what is taught.” Principal M4 aligns curriculum with assessment.

- Finance: Principal M4E4 stated that “knowledge of finance could keep you out of trouble.” Principal M4E4 was relieved that finance was “no longer a deep dark secret anymore; now, everything was out in the open.”
- Law: Principal M4E4 stressed that law was “all about knowing where to look to find the answers.”
- Technology: Principal M4E4 believed that technology was “important but not the end all.”
- Leadership: Principal M4E4 shared the personal philosophy of “leading by example, modeling, and sharing.” Principal M4E4 strived to “maintain a balance between autocratic and leading in a way that worked with others.”
- Management: Principal M4E4 viewed management as “the organizational tools and blueprint for all the principal does.”
- Personnel: Principal M4E4 emphasized that “surrounding yourself with excellent people was key.” Principal M4E4 stressed that personnel was the most important area.
- Communication: Principal M4E4 believed verbal and written communication to be personal strengths. Principal M4E4 strived to “communicate frequently with parents who respond appreciatively to the effort.”

During the second interview, each participant completed a Repertory Grid.

Principal M4E4 displayed a businesslike attitude throughout the course of the two interviews. Principal M4E4 shared construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant’s Repertory Grid except in the areas of finance and law where Principal M4E4 stated that “these two areas

represent unchangeable norms.” Throughout the completion of the Repertory Grid, Principal M4E4 used a pencil and made several changes that were rationalized to the researcher. An Extremity of Ratings Analysis of Principal M4E4’s Repertory Grid indicated that Principal M4E4 rated highest in the constructs of adaptive (50%) and resourceful (50%) and the elements of personnel (81.82%) and leadership (77.27%).

Table 6 depicts Principal M4E4’s completed Repertory Grid.

Table 6
Male Elementary School Principal (M4E4): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	2	-1	-2	1	3	1	3	2	Secretive
Democratic	1	-1	-1	1	3	1	3	1	Autocratic
Student-Oriented	1	0	0	2	0	0	0	2	Content-Oriented
Adaptive	3	1	0	2	3	1	3	3	Rigid
Vision-Big Picture	2	1	-1	2	3	1	0	0	Myopic-Details
Delegate	2	1	-1	3	0	2	3	1	Workaholic
Passion	0	0	0	0	3	1	3	2	Apathy
Challenging	2	0	0	1	3	1	3	2	Easy
School-Based	0	0	0	2	3	2	3	3	Downtown-Based
Seamless	3	0	0	2	0	1	0	0	Choppy
Spiritual	0	0	0	0	2	0	2	2	Secular
Multifaceted	2	1	0	2	3	1	3	2	Simple
Inclusive	2	0	0	0	3	3	3	0	Exclusive
Built	1	0	0	1	1	1	3	1	Mandated
Cooperative	0	0	0	0	3	2	3	3	Hindersome
Resourceful	1	3	0	1	3	2	3	3	Unimaginative
Empower	1	1	0	1	3	2	3	1	Weaken
Time Autonomy	1	0	0	1	3	1	3	1	Time Constraints
Fun	1	0	0	1	3	1	3	3	Boring
Potential	0	0	0	2	3	1	3	2	Actualized
Persistence	0	1	0	1	3	2	3	2	Lack of Persistence
Change	1	1	0	1	3	1	3	2	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal M5E5

During the first interview, a participant biography was conducted in which Principal M5E5 shared the following information:

Principal M5E5 was born in the northeastern region of the United States. Principal M5E5 had over eighteen years of experience as an administrator with a bachelor's degree in education, a master's degree in administration, and a specialist's degree in supervision. Principal M5E5 used the following high impact statements to describe personal strengths: very committed; loves the work; enjoys kids and the people who work with kids; calm; thoughtful; and a laidback management style. The following major achievements noted by Principal M5E5 were marriage; maintaining a well-rounded family life; and athletics. The events that shaped or changed Principal M5E5's life were marriage and moving to Florida. Principal M5E5 hired personnel that want to see kids succeed and strives to allow staff to develop their leadership ability.

During the full context elicitation, Principal M5E5 shared the following comments relative to each element:

- Curriculum: Principal M5E5 described curriculum as “exciting and challenging.”
- Finance: Principal M5E5 stated that “finance required perseverance.”
- Law: Principal M5E5 stated that law was “nothing to be afraid of.”
- Technology: Principal M5E5 remarked that “technology was fascinating yet intimidating.”
- Leadership: Principal M5E5 stressed that “leadership was vital.”
- Management: Principal M5E5 viewed management as “the nuts and bolts in the role of principal.”

- Personnel: Principal M5E5 emphasized that “the principal must be positive in dealing with personnel.”
- Communication: Principal M5E5 believed that “communication was easy to do; the challenge was doing it consistently.”

During the second interview, each participant completed a Repertory Grid. Principal M5E5 was succinct yet forthcoming throughout the course of the two interviews.

Principal M5E5 shared construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant’s Repertory Grid. Throughout the completion of the Repertory Grid, Principal M5E5 was quiet and appeared to be intent in addressing each cell with equal significance. An Extremity of Ratings Analysis of Principal M5E5’s Repertory Grid indicated that Principal M5E5 rated highest in the constructs of communicative (75%), democratic (50%), challenging (50%), multi-faceted (50%), resourceful (50%), and persistence (50%) and the elements of personnel (54.55%) and leadership (50%).

Table 7 depicts Principal M5E5’s completed Repertory Grid.

Table 7
Male Elementary School Principal (M5E5): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	2	1	2	3	3	3	3	3	Secretive
Democratic	1	-3	0	2	3	2	3	3	Autocratic
Student-Oriented	1	1	2	3	3	2	3	2	Content-Oriented
Adaptive	3	-1	0	3	2	2	2	2	Rigid
Vision-Big Picture	0	0	1	2	3	2	2	2	Myopic-Details
Delegate	1	-2	0	0	2	2	3	2	Workaholic
Passion	2	0	0	3	3	2	3	2	Apathy
Challenging	3	2	2	3	3	1	3	2	Easy
School-Based	1	2	0	2	3	3	3	2	Downtown-Based
Seamless	2	0	2	2	2	2	2	3	Choppy
Spiritual	0	0	0	0	2	0	2	2	Secular
Multifaceted	3	2	2	3	2	2	3	3	Simple
Inclusive	2	0	0	3	2	2	2	3	Exclusive
Built	1	1	0	2	2	2	3	2	Mandated
Cooperative	2	0	1	2	2	2	2	2	Hindersome
Resourceful	2	-3	-1	2	2	3	3	3	Unimaginative
Empower	0	0	2	2	2	1	2	2	Weaken
Time Autonomy	-1	2	1	0	2	1	2	1	Time Constraints
Fun	2	-2	0	2	3	1	3	3	Boring
Potential	0	0	1	3	3	2	3	2	Actualized
Persistence	3	2	3	1	3	3	2	2	Lack of Persistence
Change	1	0	1	3	3	2	2	2	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal F1E6

During the first interview, a participant biography was conducted in which Principal F1E6 shared the following information:

Principal F1E6 was born in the northeastern region of the United States. Principal F1E6 had over nine years of experience as an administrator with a bachelor's degree in education, a master's degree in administration, and a doctorate in education. Principal F1E6 used the following high impact statements to describe personal strengths: inclusive; collaborative; dares to try new things based on research; communicates clearly; and open to feedback. The following major achievements noted by Principal F1E6 were turning around the current school of assignment which now enjoys over-selection by parents, a high attendance rate for students, and exceeds the school improvement plan in all areas. The event that shaped or changed Principal F1E6's life was the influence of a teacher in grade school, becoming a volunteer for the Special Olympics in high school, the death of a parent at an early age, and mission trips abroad. Principal F1E6 believed that starting a teaching career in exceptional student education was good training for administration. Principal F1E6's philosophy on life was the more you give, the more you get back. Principal F1E6 believed that communication is the heart and soul of the principal's role stating that what is said to students, parents, and staff can last a lifetime.

During the full context elicitation, Principal F1E6 shared the following comments relative to each element:

- Curriculum: Principal F1E6 stated that “students drive the curriculum and the challenge in this area was to meet their needs.”

- Finance: Principal F1E6 acquiesced to teacher requests if “they strive to provide opportunities for kids.” Principal F1E6 described finance as “boring and not a favorite.”
- Law: Principal F1E6 described law as “non-negotiable.”
- Technology: Principal F1E6 believed that technology was “an area to work on and improve.” Principal F1E6 described technology as “a time saver and motivating.”
- Leadership: Principal F1E6 defined leadership as “challenging, exciting, the role of a lifetime, on-going, and fulfilling.”
- Management: Principal F1E6 summed up management as “something that must be done efficiently everyday.”
- Personnel: Principal F1E6 emphasized that the principal must view personnel as “family and the anchors of the school.”
- Communication: Principal F1E6 believed that communication was “the heart and soul of the role and that what the principal said to students, parents, and staff could last a lifetime.”

During the second interview, each participant completed a Repertory Grid.

Principal F1E6 appeared eager to engage in the methodology throughout the course of the two interviews. Principal F1E6 shared construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant’s Repertory Grid. Throughout the completion of the Repertory Grid, Principal F1E6 commented on the ratings chosen for each cell. An Extremity of Ratings Analysis of Principal F1E6’s Repertory Grid indicated that Principal F1E6 rated highest in the constructs of

communicative (50%), student oriented (62.5%), adaptive (75%), vision 62.5%), passion (62.5%), challenging 62.5%), school based (50%), multi-faceted (62.5%), cooperative (62.5%), resourceful (62.5%), empower (62.5%), fun (62.5%), potential (100%), and change (62.5%) and the elements of leadership (86.36%) and personnel (81.82%).

Table 8 depicts Principal F1E6's completed Repertory Grid.

Table 8
 Female Elementary School Principal (F1E6): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	2	-1	1	2	3	3	3	3	Secretive
Democratic	1	-1	-1	-1	3	2	2	2	Autocratic
Student-Oriented	3	1	1	2	3	3	3	3	Content-Oriented
Adaptive	2	-3	-3	3	3	2	3	3	Rigid
Vision-Big Picture	3	1	-2	2	3	3	3	3	Myopic-Details
Delegate	2	-3	-3	1	2	2	3	1	Workaholic
Passion	2	-3	0	0	3	3	3	3	Apathy
Challenging	1	2	3	3	3	3	3	2	Easy
School-Based	2	-1	-3	2	3	2	3	3	Downtown-Based
Seamless	3	-1	-2	2	3	2	3	2	Choppy
Spiritual	0	0	0	0	3	2	3	2	Secular
Multifaceted	3	1	3	3	3	3	2	2	Simple
Inclusive	3	0	0	2	3	2	3	0	Exclusive
Built	2	-1	0	2	2	2	2	2	Mandated
Cooperative	1	-3	-2	1	3	3	3	3	Hindersome
Resourceful	2	1	3	3	3	3	3	2	Unimaginative
Empower	-2	1	-3	3	3	2	3	3	Weaken
Time Autonomy	2	2	-2	3	3	2	3	0	Time Constraints
Fun	2	-3	-3	-2	3	2	3	3	Boring
Potential	3	-3	-3	3	3	3	3	3	Actualized
Persistence	2	-3	2	2	2	2	2	2	Lack of Persistence
Change	2	3	2	3	3	3	3	-1	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal F2E7

During the first interview, a participant biography was conducted in which Principal F2E7 shared the following information:

Principal F2E7 was born in the southwestern region of the United States. Principal F2E7 had ten years of experience as an administrator with a bachelor's degree in elementary education and a master's degree in administration. Principal F2E7 used the following high impact statements to describe personal strengths: Christian; strong-minded; high energy; very likable; and a finisher. The following major achievements noted by Principal F2E7 were parenthood; raising the grade of the school; changing the expectations of the staff; changing the composition of the staff; and pursuing a doctoral degree. The event that shaped or changed Principal F2E7's life was the acceptance of the principal position at the current school of assignment and the ensuing challenges that decision incurred. Principal F2E7 hired people who share the same expectations for the students and the school. Principal F2E7 indicated that a position training and supporting new principals would be the only reason to leave the current position.

During the full context elicitation, Principal F2E7 shared the following comments relative to each element:

- Curriculum: Principal F2E7 described curriculum as “choppy, difficult, and an area that required training.”
- Finance: Principal F2E7 stated that “finance was an area where a principal could delegate yet creative, honest, and bold.”

- Law: Principal F2E7 explained that “the principal must know the law and when the line was being crossed especially in the areas of emails, rights of individuals, and policy.”
- Technology: Principal F2E7 emphasized that “technology was very important.”
- Leadership: Principal F2E7 defined leadership as “steadfast, creative, and empowering.”
- Management: Principal F2E7 “hated the word management and preferred to look at management as setting high expectations.”
- Personnel: Principal F2E7 used the word “special” when talking about personnel. A personal philosophy was “to never hire anyone you wouldn’t want to go camping with for a few days.”
- Communication: Principal F1E6 believed that “the principal was the walking billboard for the school and must exude confidence yet be comfortable in communicating.”

During the second interview, each participant completed a Repertory Grid.

Principal F2E7 appeared eager to participate in the two interviews despite initial rejection of the researcher’s attempts to secure involvement in the study. Principal F2E7 shared construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant’s Repertory Grid. Throughout the completion of the Repertory Grid, Principal F2E7 verbally commented on the ratings chosen for each cell. An Extremity of Ratings Analysis of Principal F2E7’s Repertory Grid indicated that Principal F2E7 rated highest in the constructs of communicative (100%), democratic (87.5%), student oriented (100%), adaptive (100%), vision (75%), delegate (75%),

passion (87.5%), school based (100%), seamless (100%), spiritual (100%), inclusive (75%), built (87.5%), cooperative (100%), resourceful (100%), empower (100%), time autonomy (75%), fun (87.5%), and persistence (87.5%) and the elements of technology (100%), leadership (100%), and communication (100%).

Table 9 depicts Principal F2E7's completed Repertory Grid.

Table 9
Female Elementary School Principal (F2E7): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	3	3	3	3	3	3	3	3	Secretive
Democratic	2	3	3	3	3	3	3	3	Autocratic
Student-Oriented	3	3	3	3	3	3	3	3	Content-Oriented
Adaptive	3	3	3	3	3	3	3	3	Rigid
Vision-Big Picture	3	2	2	3	3	3	3	3	Myopic-Details
Delegate	2	3	2	3	3	3	3	3	Workaholic
Passion	3	2	3	3	3	3	3	3	Apathy
Challenging	3	1	1	3	3	0	-1	3	Easy
School-Based	3	3	3	3	3	3	3	3	Downtown-Based
Seamless	3	3	3	3	3	3	3	3	Choppy
Spiritual	3	3	3	3	3	3	3	3	Secular
Multifaceted	2	2	1	3	3	3	3	3	Simple
Inclusive	2	2	3	3	3	3	3	3	Exclusive
Built	3	3	2	3	3	3	3	3	Mandated
Cooperative	3	3	3	3	3	3	3	3	Hindersome
Resourceful	3	3	3	3	3	3	3	3	Unimaginative
Empower	3	3	3	3	3	3	3	3	Weaken
Time Autonomy	3	2	-2	3	3	3	3	3	Time Constraints
Fun	3	2	3	3	3	3	3	3	Boring
Potential	2	2	2	3	3	3	3	3	Actualized
Persistence	3	3	2	3	3	3	3	3	Lack of Persistence
Change	3	1	1	3	3	2	3	3	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal F3E8

During the first interview, a participant biography was conducted in which Principal F3E8 shared the following information:

Principal F3E8 was born in the northeastern region of the United States. Principal F3E8 had over twenty years of experience as an administrator with a bachelor's degree in education and a master's degree in administration. Principal F3E8 used the following high impact statements to describe personal strengths: effective communicator; very strong human relation skills; highly organized; proactive; and a systems thinker who is able to look at the big picture. The following major achievements noted by Principal F3E8 were parenthood, successfully opening a new school, and assisting a low performing school to attain goals. The event that shaped or changed Principal F3E8's life was the influence of a parent who taught Principal F3E8 to be empathetic, non-judgmental, accepting, and look for the good in people. These qualities were what Principal F3E8 believed had contributed to personal success in education. Principal F3E8 stated that leadership is a team activity that impacts everything that happens and the principal's role as leader is to coach the team.

During the full context elicitation, Principal F3E8 shared the following comments relative to each element:

- Curriculum: Principal F3E8 defined curriculum as “reflecting state standards.”
- Finance: Principal F3E8 stated that finance was “an area where a principal should work smart to allocate resources.”
- Law: Principal F3E8 emphasized that “the principal must abide by the law with understanding and knowledge.”

- Technology: Principal F3E8 stated that “technology supported the work of the principal.”
- Leadership: Principal F3E8 defined leadership as “a team activity in which the principal acted as a coach.”
- Management: Principal F3E8 stressed that “management should not take precedence over leadership.”
- Personnel: Principal F3E8 emphasized that “the principal must hire the best, matching strengths with the position.”
- Communication: Principal F3E8 believed communication was “key and critical in the role of principal.”

During the second interview, each participant completed a Repertory Grid.

Principal F3E8 appeared eager to participate in the two interviews despite initial rejection of the researcher’s attempts to secure involvement in the study. Principal F3E8 shared construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant’s Repertory Grid. At one point during the completion of the Repertory Grid, Principal F3E8 was interrupted by an event that required immediate attention. Principal F3E8 returned to the completion intent in addressing each cell with significance. An Extremity of Ratings Analysis of Principal F3E8’s Repertory Grid indicated that Principal F3E8 rated highest in the constructs of communicative (62.5%), student oriented (100%), passion (50%), challenging (50%), school based (50%), seamless (50%), inclusive (75%), cooperative (100%), resourceful (50%), empower (50%), fun (62.5%), persistence (87.5%), and change (50%) and the element of leadership (81.82%).

Table 10 depicts Principal F3E8's completed Repertory Grid.

Table 10
 Female Elementary School Principal (F3E8): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	3	2	3	2	3	2	3	3	Secretive
Democratic	0	2	0	2	0	3	3	0	Autocratic
Student-Oriented	3	3	3	3	3	3	3	3	Content-Oriented
Adaptive	2	2	0	2	3	2	1	3	Rigid
Vision-Big Picture	0	1	0	3	3	0	3	2	Myopic-Details
Delegate	2	-1	0	3	3	2	3	2	Workaholic
Passion	1	-2	0	2	3	3	3	3	Apathy
Challenging	3	0	0	3	3	1	1	-3	Easy
School-Based	-1	2	0	2	3	3	3	3	Downtown-Based
Seamless	3	0	0	2	3	3	2	3	Choppy
Spiritual	0	0	0	0	0	0	0	0	Secular
Multifaceted	2	-1	0	2	3	2	2	1	Simple
Inclusive	3	1	3	3	3	2	3	3	Exclusive
Built	-1	2	0	1	3	2	0	0	Mandated
Cooperative	3	3	3	3	3	3	3	3	Hindersome
Resourceful	1	3	1	2	3	3	3	1	Unimaginative
Empower	0	1	0	3	3	1	3	3	Weaken
Time Autonomy	-2	-2	-3	0	0	-1	0	3	Time Constraints
Fun	3	0	0	3	3	2	3	3	Boring
Potential	-1	-1	-3	3	2	1	3	2	Actualized
Persistence	3	3	3	2	3	3	3	3	Lack of Persistence
Change	2	1	1	3	3	3	3	1	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal F4E9

During the first interview, a participant biography was conducted in which Principal F4E9 shared the following information:

Principal F4E9 was born in the western region of the United States. Principal F4E9 had over five years of experience as an administrator with a bachelor's degree in education and a master's degree in curriculum and instruction. Principal F4E9 used the following high impact statements to describe personal strengths: energetic; effective communicator; passionate; and dedicated. The following major achievements noted by Principal F4E9 were marriage; maintaining a strong family life; opening a new school; and leading staff development training. The events that shaped or changed Principal F4E9's life were extensive travel opportunities, starting a career in business and then switching to education after helping siblings with their studies. Principal F4E9 emphasized that communication is critical; it is the backbone of the school.

During the full context elicitation, Principal F4E9 shared the following comments relative to each element:

- Curriculum: Principal F4E9 defined curriculum as “far reaching.”
- Finance: Principal F4E9 stated that “finance was an area that is critical to running the school.”
- Law: Principal F4E9 believed “the principal was sunk without the law.”
- Technology: Principal F4E9 defined technology as “integrated.”
- Leadership: Principal F4E9 emphasized “flexibility in the role of principal.”
- Management: Principal F4E9 stated that “management was the day to day.”
- Personnel: Principal F4E9 emphasized that “personnel was critical to the school.”

- Communication: Principal F4E9 believed communication was “the backbone of the school.”

During the second interview, each participant completed a Repertory Grid. Principal F4E9 initially rejected the researcher’s attempts to secure involvement and was persuaded to participate in the study by a colleague. At the beginning of the first interview, Principal F4E9 appeared reticent. As the interview proceeded, Principal F4E9 began to actively engage in the process commenting at the end that the experience had been “surprisingly enjoyable.” Principal F4E9 shared construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant’s Repertory Grid. Throughout the completion of the Repertory Grid, Principal F4E9 commented on the ratings chosen for each cell. An Extremity of Ratings Analysis of Principal F4E9’s Repertory Grid indicated that Principal F4E9 rated highest in the constructs of communicative (75%), student oriented (75%), adaptive (75%), passion (50%), school based (62.5%), multi-faceted (50%), and inclusive (50%) and the elements of curriculum (59.09%) and leadership (54.55%).

Table 11 depicts Principal F4E9’s completed Repertory Grid.

Table 11
Female Elementary School Principal (F4E9): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	3	3	3	2	3	2	3	3	Secretive
Democratic	0	3	0	0	3	2	1	3	Autocratic
Student-Oriented	3	0	0	3	3	3	3	3	Content-Oriented
Adaptive	3	1	3	1	3	3	3	3	Rigid
Vision-Big Picture	2	1	1	1	3	2	2	1	Myopic-Details
Delegate	1	2	0	1	2	2	2	1	Workaholic
Passion	3	-2	1	-1	3	2	3	3	Apathy
Challenging	2	0	0	-1	1	1	1	0	Easy
School-Based	3	3	0	2	3	3	3	2	Downtown-Based
Seamless	3	0	0	2	3	2	0	3	Choppy
Spiritual	0	0	0	0	1	1	0	0	Secular
Multifaceted	3	1	0	1	3	2	3	3	Simple
Inclusive	3	0	0	3	2	2	3	3	Exclusive
Built	3	0	0	1	2	2	3	3	Mandated
Cooperative	3	1	0	2	2	1	1	3	Hindersome
Resourceful	3	2	1	1	2	1	2	0	Unimaginative
Empower	0	2	1	1	2	1	2	2	Weaken
Time Autonomy	-3	0	0	0	1	1	0	0	Time Constraints
Fun	3	0	0	1	3	-1	3	1	Boring
Potential	0	1	1	1	2	1	2	1	Actualized
Persistence	0	0	0	0	3	1	2	1	Lack of Persistence
Change	-1	0	0	1	3	1	-2	1	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal F5E10

During the first interview, a participant biography was conducted in which Principal F5E10 shared the following information:

Principal F5E10 was born in the southern region of the United States. Principal F5E10 had almost twenty years of experience as an administrator with a bachelor's degree in education and a master's degree in administration. Principal F5E10 used the following high impact statements to describe personal strengths: energetic; focused; task-oriented; people-oriented; and empathetic. The following major achievements noted by Principal F5E10 were surviving almost thirty years and over twelve superintendents in the same school district; accepting the position at the current school of assignment; increasing the test scores of students; winning numerous awards; and parenthood. The event that shaped or changed Principal F5E10's life was learning how to communicate effectively with parents through an experience as a first year teacher that taught Principal F5E10 to not lose your cool, listen, and respect parents. Principal F5E10 stated that a major change in thinking about the role of principal occurred during an opportunity to participate in an internationally renowned principal training offered by a renowned university. Principal F5E10 believed in hiring individuals based on potential and in coaching them to do their best. Principal F5E10 emphasized that without good people, there is no good school.

During the full context elicitation, Principal F5E10 shared the following comments relative to each element:

- Curriculum: Principal F5E10 defined curriculum as “the basis of everything.”

- Finance: Principal F5E10 believed in “securing resources to ensure a lot of money.”
- Law: Principal F5E10 stated that “the principal must recognize and seek expert advice.”
- Technology: Principal F5E10 described technology as “convenient and accessible.” Principal F5E10 stated that “the principal must model the use of technology.”
- Leadership: Principal F5E10 emphasized that “leadership was coaching people and that the principal must have the innate ability to lead people with trust and practice the skill of inspecting what they expect.”
- Management: Principal F5E10 managed the school by “walking the campus throughout each day.”
- Personnel: Principal F5E10 hired people based on “their potential.”
- Communication: Principal F5E10 believed “communication was key and that the principal should never respond when people were angry.” Principal F5E10 stated that “big issues should sit overnight before decisions are made.”

During the second interview, each participant completed a Repertory Grid.

Principal F5E10 appeared eager to participate in the interviews yet made it clear at the onset that if the process got painful, it would stop immediately. Principal F5E10 shared the following construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant’s Repertory Grid. Throughout the completion of the Repertory Grid, Principal F5E10 commented on the ratings chosen for each cell. An Extremity of Ratings Analysis of Principal F5E10’s Repertory Grid

indicated that Principal F5E10 rated highest in the constructs of student oriented (100%), adaptive (75%), vision (87.5%), delegate (75%), school based (100%), seamless (100%), spiritual (100%), multi-faceted (87.5%), inclusive (100%), built (100%), resourceful (87.5%), empower (87.5%), time autonomy (87.5%), fun (75%), potential (75%), persistence (100%), and change (75%) and the elements of leadership, management (100%), and personnel (100%).

Table 12 depicts Principal F5E10's completed Repertory Grid.

Table 12
 Female Elementary School Principal (F5E10): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	3	3	2	2	3	3	3	0	Secretive
Democratic	3	0	0	2	3	3	3	3	Autocratic
Student-Oriented	3	3	3	3	3	3	3	3	Content-Oriented
Adaptive	2	3	0	3	3	3	3	3	Rigid
Vision-Big Picture	3	3	0	3	3	3	3	3	Myopic-Details
Delegate	3	0	0	3	3	3	3	3	Workaholic
Passion	3	0	0	2	3	3	3	3	Apathy
Challenging	3	0	0	3	3	3	3	3	Easy
School-Based	3	3	3	3	3	3	3	3	Downtown-Based
Seamless	3	3	3	3	3	3	3	3	Choppy
Spiritual	3	3	3	3	3	3	3	3	Secular
Multifaceted	3	3	0	3	3	3	3	3	Simple
Inclusive	3	3	3	3	3	3	3	3	Exclusive
Built	3	3	3	3	3	3	3	3	Mandated
Cooperative	3	0	0	3	3	3	3	3	Hindersome
Resourceful	3	3	2	3	3	3	3	3	Unimaginative
Empower	3	3	0	3	3	3	3	3	Weaken
Time Autonomy	3	3	2	3	3	3	3	3	Time Constraints
Fun	3	0	0	3	3	3	3	3	Boring
Potential	3	2	2	3	3	3	3	3	Actualized
Persistence	3	3	3	3	3	3	3	3	Lack of Persistence
Change	3	0	0	3	3	3	3	3	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal M6M1

During the first interview, a participant biography was conducted in which Principal M6M1 shared the following information:

Principal M6M1 was born in the northeastern region of the United States. Principal M6M1 had over five years of experience as an administrator with a bachelor's degree in education and a master's degree in administration. Principal M6M1 used the following high impact statements to describe personal strengths: friendly; good with relationships; active listener; athletic; flexible; energetic; task-oriented; disciplinarian; creative; and thinks out of the box. The following major achievements noted by Principal M6M1 were maintaining a well-rounded family life; attaining the principal position; and having a strong connection with the community. The events that shaped or changed Principal M6M1's life were the discovery of a brain tumor that was successfully removed despite the odds. Following the surgery, Principal M6M1 made a decision to do everything with a passion, with caring, and to strive to find the value in every part of life. Principal M6M1 believes that starting a teaching career in exceptional student education was good training for administration. Principal M6M1 emphasized that personnel must have a love for the profession and shared the personal philosophy of the importance of developing a community of people around you.

During the full context elicitation, Principal M6M1 shared the following comments relative to each element:

- Curriculum: Principal M6M1 defined curriculum as “opening the doors of opportunity and success for all students.”

- Finance: Principal M6M1 shared that “finance could be either the worst hindrance or the most beneficial.”
- Law: Principal M6M1 described law as “the guidelines to follow.”
- Technology: Principal M6M1 explained that “technology was a tool, not a source in itself.”
- Leadership: Principal M6M1 stressed that “leadership should be evident at all levels in the school.”
- Management: Principal M6M1 defined management as “the sundry activities not associated with the educational process.”
- Personnel: Principal M6M1 hired people based on their “love for the profession.”
- Communication: Principal M6M1 believed “communication was key and that the principal should know their audience.”

During the second interview, each participant completed a Repertory Grid.

Principal M6M1 initially appeared eager to participate in the study and actively engaged in the first interview. Principal M6M1 shared construct elaborations related to each element; these elaborations do not appear to be consistent with the ratings on this participant’s Repertory Grid. This inconsistency may be explained by a situation that occurred between the first and second interview: a significant member of Principal M6M1’s family became critically ill. This situation may have significantly impacted the ratings on the completed Repertory Grid. An Extremity of Ratings Analysis of Principal M6M1’s Repertory Grid indicated that Principal M6M1 rated highest in the constructs of communicative (100%), student oriented (75%), delegate (50%), passion (50%), challenging (50%), and school based (50%) and the element of curriculum (59.05%).

Table 13 depicts Principal M6M1's completed Repertory Grid.

Table 13
Male Middle School Principal (M6M1): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	3	3	3	3	3	3	3	3	Secretive
Democratic	2	1	1	2	2	1	2	2	Autocratic
Student-Oriented	3	3	3	3	3	2	3	1	Content-Oriented
Adaptive	3	3	2	0	3	1	2	2	Rigid
Vision-Big Picture	3	0	0	2	3	3	0	2	Myopic-Details
Delegate	3	0	0	0	3	3	3	0	Workaholic
Passion	3	0	0	0	3	0	3	3	Apathy
Challenging	3	0	0	2	3	3	3	0	Easy
School-Based	2	2	0	2	3	3	3	3	Downtown-Based
Seamless	0	0	0	0	0	0	0	0	Choppy
Spiritual	0	0	0	0	0	0	0	0	Secular
Multifaceted	3	0	0	0	0	0	0	2	Simple
Inclusive	3	0	0	0	0	0	0	2	Exclusive
Built	0	0	0	0	0	0	0	0	Mandated
Cooperative	3	0	0	0	0	0	0	0	Hindersome
Resourceful	3	0	0	0	0	0	0	0	Unimaginative
Empower	2	0	0	0	0	0	0	3	Weaken
Time Autonomy	2	0	0	0	0	0	0	0	Time Constraints
Fun	3	0	0	0	0	0	0	0	Boring
Potential	2	0	0	0	0	0	0	0	Actualized
Persistence	2	0	0	0	0	0	0	0	Lack of Persistence
Change	3	0	2	0	0	0	0	0	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal M7M2

During the first interview, a participant biography was conducted in which Principal M7M2 shared the following information:

Principal M7M2 was born in the northeastern region of the United States. Principal M7M2 had over thirty years of experience as an administrator with a bachelor's degree in history, a master's degree in social sciences, and a specialist's degree in administration. Principal M7M2 used the following high impact statements to describe personal strengths: intelligent; gets along well with people; extremely goal oriented; and dedicated to my school, staff, and kids. The following major achievements noted by Principal M7M2 were parenthood; thirty-one years of experience as an administrator; winning awards; and turning around a school that had safety and academic concerns. The events that shaped or changed Principal M7M2's life were marriage; years as a classroom teacher; years as a dean; and years as an assistant principal learning from principals how to turn a school around and how not to treat people. Principal M7M2 stated that there is not room for mediocrity in education anymore. Principal M7M2 believed the most important skill was to be able to identify people who will be successful in their job.

During the full context elicitation, Principal M7M2 shared the following comments relative to each element:

- Curriculum: Principal M7M2 defined curriculum as “where the rubber meets the road.”
- Finance: Principal M7M2 shared that finance was “an on-going struggle to secure resources.”

- Law: Principal M7M2 viewed law as “a massive restraint on the principal’s ability to do the job.”
- Technology: Principal M7M2 stated that “technology was enamoring.”
- Leadership: Principal M7M2 described leadership as “a commodity in short supply...the principal must have a quality that the staff will see to convince them to follow.”
- Management: Principal M7M2 believed that “the ability to manage minor daily crisis is the key to keeping an eye on the main goal.”
- Personnel: Principal M7M2 strived to “identify people who would be successful in their job.”
- Communication: Principal M7M2 believed communication was “an absolute must for any successful administrator.”

During the second interview, each participant completed a Repertory Grid.

Principal M7M2 initially displayed a businesslike attitude yet appeared more comfortable as the first interview proceeded. Principal M7M2 shared construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant’s Repertory Grid. Throughout the completion of the Repertory Grid, Principal M7M2 was quiet and intense, taking breaks to check email. An Extremity of Ratings Analysis of Principal M7M2’s Repertory Grid indicated that Principal M7M2 rated highest in the constructs of student oriented (37.5%), challenging (37.5%), and resourceful (37.5%) and the element of technology (40.91%).

Table 14 depicts Principal M7M2’s completed Repertory Grid.

Table 14
Male Middle School Principal (M7M2): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	2	-2	1	3	2	2	2	3	Secretive
Democratic	1	-3	-2	2	1	1	1	2	Autocratic
Student-Oriented	3	0	2	3	3	1	1	2	Content-Oriented
Adaptive	2	0	1	3	2	2	1	3	Rigid
Vision-Big Picture	2	0	0	2	2	2	1	2	Myopic-Details
Delegate	3	1	1	2	1	1	1	2	Workaholic
Passion	-1	0	0	1	2	2	0	1	Apathy
Challenging	3	0	-2	3	3	2	1	1	Easy
School-Based	-2	2	0	3	1	1	-1	1	Downtown-Based
Seamless	2	0	1	3	-1	1	-1	-1	Choppy
Spiritual	0	0	0	0	1	-2	-1	-2	Secular
Multifaceted	2	0	0	3	2	2	1	1	Simple
Inclusive	3	0	2	1	2	2	1	3	Exclusive
Built	3	1	2	-1	1	2	-2	-1	Mandated
Cooperative	-1	1	-2	1	1	1	-2	1	Hindersome
Resourceful	0	3	1	3	1	3	-1	1	Unimaginative
Empower	0	1	-1	2	1	2	0	1	Weaken
Time Autonomy	0	-1	-1	2	-2	-2	-2	-1	Time Constraints
Fun	1	0	-3	2	1	1	-1	1	Boring
Potential	2	0	0	2	1	-2	-1	-1	Actualized
Persistence	0	1	-2	1	2	1	1	1	Lack of Persistence
Change	2	0	1	3	3	2	1	1	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal F6M3

During the first interview, a participant biography was conducted in which Principal F6M3 shared the following information:

Principal F6M3 was born in the northeastern region of the United States. Principal F6M3 had over six years of experience as an administrator with a bachelor's degree in business, a master's degree in administration, a specialist's degree in administration, and a doctorate in psychology. Principal F6M3 used the following high impact statements to describe personal strengths: ability to communicate with all stakeholders; ability to adjust style to various situations; ability to be flexible and fluid; and ability to stay calm under pressure and not be reactive. The following major achievements noted by Principal F6M3 were parenthood; earning a doctorate; and surviving the challenges as a first year principal. The event that shaped or changed Principal F6M3's life was negative experiences in school while growing up, especially high school. Principal F6M3 now strives to create educational experiences that are different from those personally experienced in childhood. Principal F6M3 mentioned that the current level of personal success in education is attributed in large part to a grandmother who was very supportive. Principal F6M3 believed that starting a career in the business world prior to going into education was good training for administration.

During the full context elicitation, Principal F6M3 shared the following comments relative to each element:

- Curriculum: Principal F6M3 stated that “curriculum drives instruction and stressed that on-going assessment lets you know where you've been so you know where you need to go.”

- Finance: Principal F6M3 believed that “finance was all about balancing resources and knowing your funding sources.”
- Law: Principal F6M3 defined law as “the guidelines to make sure you know.”
- Technology: Principal F6M3 described technology as “a tool to help us communicate better.”
- Leadership: Principal F6M3 stressed that “leadership meant bringing everyone along effectively.”
- Management: Principal F6M3 stated that “management was the organizational and balancing piece.”
- Personnel: Principal F6M3 shared that “the area of personnel was “the most challenging and time consuming.”
- Communication: Principal F6M3 believed “the principal must have the ability to communicate in lots of ways.”

During the second interview, each participant completed a Repertory Grid.

Principal F6M3 was reserved initially yet then appeared more relaxed throughout the course of the two interviews. Principal F6M3 shared the following construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant’s Repertory Grid. Throughout the completion of the Repertory Grid, Principal F6M3 commented on the ratings chosen for each cell. An Extremity of Ratings Analysis of Principal F6M3’s Repertory Grid indicated that Principal F6M3 rated highest in the constructs of communicative (62.5%), student oriented (62.5%), adaptive (50%), vision (50%), challenging (50%), cooperative (50%), resourceful (75%), empower (50%), potential (50%), and persistence (50%) and the element of leadership (68.18%).

Table 15 depicts Principal F6M3's completed Repertory Grid.

Table 15
Female Middle School Principal (F6M3): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	2	1	2	3	3	3	3	3	Secretive
Democratic	0	1	2	1	2	1	2	3	Autocratic
Student-Oriented	3	2	3	3	3	2	3	1	Content-Oriented
Adaptive	3	2	1	3	3	2	3	2	Rigid
Vision-Big Picture	3	1	0	1	3	1	3	3	Myopic-Details
Delegate	1	1	0	0	3	3	2	2	Workaholic
Passion	0	0	1	0	3	1	3	3	Apathy
Challenging	2	-3	-2	-3	-1	-3	-2	-3	Easy
School-Based	1	2	0	2	3	2	2	0	Downtown-Based
Seamless	3	1	0	2	2	2	2	2	Choppy
Spiritual	0	0	0	0	1	1	1	1	Secular
Multifaceted	2	-1	-1	2	3	2	3	2	Simple
Inclusive	2	2	2	2	3	2	1	2	Exclusive
Built	1	1	0	1	3	2	1	1	Mandated
Cooperative	2	3	2	2	3	2	3	3	Hindersome
Resourceful	0	3	3	1	3	3	3	3	Unimaginative
Empower	2	3	3	2	3	2	2	3	Weaken
Time Autonomy	1	0	0	0	0	0	0	0	Time Constraints
Fun	2	0	0	2	2	2	2	3	Boring
Potential	3	0	1	3	3	2	3	2	Actualized
Persistence	3	1	1	1	3	3	2	3	Lack of Persistence
Change	1	-2	-2	2	2	2	-2	2	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal F7M4

During the first interview, a participant biography was conducted in which Principal F7M4 shared the following information:

Principal F7M4 was born in the midwestern region of the United States. Principal F7M4 had almost twenty years of experience as an administrator with a bachelor's degree in education and a master's degree in administration. Principal F7M4 used the following high impact statements to describe personal strengths: competitive; data driven; optimistic about student improvement; fair; reasonable; and having high expectations. The following major achievements noted by Principal F7M4 were parenthood; winning national recognition; being the principal of a school that was in high demand; and securing positive parent surveys. The events that shaped or changed Principal F7M4's life were the death of a parent that led to a choice to become a teacher and a divorce that led to a decision to become an administrator. Principal F7M4 stated that learning to qualify processes led to major changes in developing a personal philosophy on education. Principal F7M4 hires potentially good candidates based on instinct. Principal F7M4 emphasized that continuously developing staff is the most important part of the principal's job and that the evaluation cycle took the largest portion of time.

During the full context elicitation, Principal F7M4 shared the following comments relative to each element:

- Curriculum: Principal F7M4 described curriculum as “creative and inspirational.” Principal F7M4 shared the analogy that “students were the customers and curriculum was the product we create.”

- Finance: Principal F7M4 shared that “principals need to be creative with resources and raising discretionary dollars.”
- Law: Principal F7M4 compared the law to “a mosaic puzzle; it takes a long time to learn all the laws.”
- Technology: Principal F7M4 viewed technology as “a tool that was simultaneously engaging, irritating, and speeding the world up.”
- Leadership: Principal F7M4 believed that “leadership meant having a clear picture of what school could be.”
- Management: Principal F7M4 stated that “management had to be a pattern, a system, and a procedure.”
- Personnel: Principal F7M4 stressed that “developing personnel was the most important part of the principal’s job.”
- Communication: Principal F7M4 strived to “stay neutral amidst the plethora of emails, phone calls, and print communication.” Principal F7M4 believed that “principals needed to reach out to parents and provide parents with a way to reach in.”

During the second interview, each participant completed a Repertory Grid. Principal F7M4 initially appeared passive and uninterested in participating in the methodology. As the interviews progressed, Principal F7M4 began to engage more, displaying genuine interest in the experience. Principal F7M4 shared the following construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant’s Repertory Grid. Throughout the completion of the Repertory Grid, Principal F7M4 verbally commented on the ratings chosen for the

majority of the cells. An Extremity of Ratings Analysis of Principal F7M4's Repertory Grid indicated that Principal F7M4 rated highest in the constructs of vision (62.5%), delegate (50%), school based (50%), and empower (75%) and the elements of curriculum (59.09%) and leadership (50%).

Table 16 depicts Principal F7M4's completed Repertory Grid.

Table 16
Female Middle School Principal (F7M4): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	3	1	2	2	3	2	1	3	Secretive
Democratic	3	2	2	1	2	2	2	2	Autocratic
Student-Oriented	3	3	2	2	2	2	3	2	Content-Oriented
Adaptive	3	1	1	3	3	2	2	2	Rigid
Vision-Big Picture	3	1	1	3	3	2	3	3	Myopic-Details
Delegate	2	2	3	3	2	3	2	3	Workaholic
Passion	3	1	0	1	3	1	0	3	Apathy
Challenging	3	0	0	1	2	1	3	2	Easy
School-Based	1	3	1	1	3	3	3	1	Downtown-Based
Seamless	1	0	0	0	0	1	1	1	Choppy
Spiritual	0	0	0	0	0	0	0	0	Secular
Multifaceted	2	2	2	2	2	1	1	2	Simple
Inclusive	1	0	0	3	1	2	1	3	Exclusive
Built	3	1	0	1	2	2	2	2	Mandated
Cooperative	3	-1	0	1	1	1	1	1	Hindersome
Resourceful	1	3	0	1	3	2	3	0	Unimaginative
Empower	3	3	1	3	3	2	3	3	Weaken
Time Autonomy	1	3	-1	1	3	1	1	3	Time Constraints
Fun	3	1	-1	1	3	1	-1	1	Boring
Potential	3	-1	1	3	3	2	2	1	Actualized
Persistence	3	1	-1	2	3	2	2	2	Lack of Persistence
Change	2	2	-1	1	2	2	2	1	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal M8H1

During the first interview, a participant biography was conducted in which Principal M8H1 shared the following information:

Principal M8H1 was born in the northwestern region of the United States. Principal M8H1 had over twenty years of experience as an administrator with a bachelor's degree in social sciences and a master's degree in administration. Principal M8H1 used the following high impact statements to describe personal strengths: experienced; energetic; in control; straight forward; and a people person. The following major achievements noted by Principal M8H1 were becoming a principal at a young age; opening new schools; and winning awards in recognition for leadership. The event that shaped or changed Principal M8M1's life was being awarded a scholarship to attend college which was the beginning of a series of opportunities that led to the current position. Principal M8H1 suggested that every school should have business managers and personnel relations people on staff to allow the principal to focus on educational leadership. Principal M8H1 also recommended frequent retreats for administrators to facilitate team building.

During the full context elicitation, Principal M8H1 shared the following comments relative to each element:

- Curriculum: Principal M8H1 described curriculum as “ever-changing, difficult to grasp, in need of adjustment, and impossible to cover.”
- Finance: Principal M8H1 viewed finance as “an area of disconnect since there was never enough money.”
- Law: Principal M8H1 defined law as “a necessary evil.”

- Technology: Principal M8H1 stated that “technology can be your greatest friend or your worst enemy.”
- Leadership: Principal M8H1 described leadership as “easier said than done yet the single most important factor in the school.”
- Management: Principal M8H1 viewed management as “a pain that nothing prepares you for.”
- Personnel: Principal M8H1 believed personnel were “the key to success and that good people make the principal look good.” Principal M8H1 strived to “coach teachers to teach.”
- Communication: Principal M8H1 believed communication was “another key to success and promoted two-way communication between the principal and all stakeholders.”

During the second interview, each participant completed a Repertory Grid.

Principal M8H1 appeared eager to participate in the study and was animated throughout the course of the two interviews. Principal M8H1 shared the following construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant’s Repertory Grid. Throughout the completion of the Repertory Grid, Principal M8H1 was quiet, taking breaks to take a phone call and check email. Following each break, Principal M8H1 would resume the completion with thorough attention to each cell. An Extremity of Ratings Analysis of Principal M8H1’s Repertory Grid indicated that Principal M8H1 rated highest in the constructs of communicative (100%), student oriented (87.5%), adaptive (75%), vision (75%), passion (62.5%), school

based (50%), seamless (75%), multi-faceted (75%), inclusive (100%), cooperative (100%), resourceful (87.5%), empower (87.5%), time autonomy (87.5%), potential (62.5%), persistence (62.5%), and change (50%) and the elements of leadership (81.82%), management (77.27%), technology (72.73%), personnel (72.72%), and communication (72.73%).

Table 17 depicts Principal M8M1's completed Repertory Grid.

Table 17
Male High School Principal (M8H1): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	3	3	3	3	3	3	3	3	Secretive
Democratic	2	2	2	2	3	3	2	3	Autocratic
Student-Oriented	3	3	2	3	3	3	3	3	Content-Oriented
Adaptive	2	2	3	3	3	3	3	3	Rigid
Vision-Big Picture	2	2	3	3	3	3	3	3	Myopic-Details
Delegate	-1	-2	1	1	3	3	1	1	Workaholic
Passion	3	-1	2	2	3	3	3	3	Apathy
Challenging	3	-3	-3	1	2	1	1	2	Easy
School-Based	2	2	1	3	3	3	3	2	Downtown-Based
Seamless	3	0	2	3	3	3	3	3	Choppy
Spiritual	0	0	0	0	1	1	0	1	Secular
Multifaceted	3	-2	-2	3	3	3	3	3	Simple
Inclusive	3	3	3	3	3	3	3	3	Exclusive
Built	-1	1	1	3	1	1	0	2	Mandated
Cooperative	3	3	3	3	3	3	3	3	Hindersome
Resourceful	3	3	1	3	3	3	3	3	Unimaginative
Empower	2	3	3	3	3	3	3	3	Weaken
Time Autonomy	1	3	3	3	3	3	3	3	Time Constraints
Fun	2	1	0	2	2	1	3	2	Boring
Potential	2	2	2	3	3	3	3	3	Actualized
Persistence	1	2	2	3	3	3	3	3	Lack of Persistence
Change	3	1	-1	3	3	2	2	3	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Principal M9H2

During the first interview, a participant biography was conducted in which Principal M9H2 shared the following information:

Principal M9H2 was born in the southern region of the United States. Principal M9H2 had over six years of experience as an administrator with a bachelor's degree in education and a master's degree in administration. Principal M9H2 used the following high impact statements to describe personal strengths: passionate; analytical; methodical; workaholic; spiritually based; accepting of people; and confident. The following major achievements noted by Principal M9H2 were parenthood; accepting the principal position at the current school of assignment; community service; and recognition as a respected teacher. The event that shaped or changed Principal M9H2's life was growing up in a home where education was highly valued. Principal M9H2 hired people based on their quality of knowledge as well as their quality of character. Principal M9H2 believed that a key piece in running a school was to find ways to maximize each individual's strengths.

During the full context elicitation, Principal M9H2 shared the following comments relative to each element:

- Curriculum: Principal M9H2 defined curriculum as “teaching, learning, assessment, planning, instructional strategies, standards, objectives, and learning gains.” Principal M9H2 stated that “curriculum must be a two-way street balancing student-oriented and content-oriented.”
- Finance: Principal M9H2 stressed that “the principal needed to look for ways to get the most mileage from finance.”

- Law: Principal M9H2 used the terms “moral standards” and “protection of stakeholders” when referring to the law.
- Technology: Principal M9H2 described technology as “a tool to support the mechanism of learning.”
- Leadership: Principal M9H2 believed leadership was “inspirational, balanced, done with perspective, and adaptive.”
- Management: Principal M9H2 stated that management was “the structures, the processes, and the systems.” Principal M9H2 added that “this was an area the principal could delegate.”
- Personnel: Principal M9H2 hired people based on “the quality of their knowledge as well as the quality of character.” Principal M9H2 stated that “a key piece in the area of personnel is looking for ways to maximize each individual’s strengths.”
- Communication: Principal M9H2 believed that “communication was vitally important and that the principal must have the ability to communicate in honest and clear ways.”

During the second interview, each participant completed a Repertory Grid.

Principal M9H2 appeared eager to participate in each of the two interviews. Principal M9H2 shared the following construct elaborations related to each element; these elaborations appear to be consistent with the ratings on this participant’s Repertory Grid. Throughout the completion of the Repertory Grid, Principal M9H2 was quiet and appeared diligent in addressing each cell with equal significance. An Extremity of Ratings Analysis of Principal M9H2’s Repertory Grid indicated that Principal M9H2 rated highest in the constructs of communicative (75%), democratic (50%), student

oriented (100%), adaptive (62.5%), vision (62.5%), passion (75%), challenging (50%), school based (75%), seamless (75%), inclusive (62.5%), and change (50%) and the element of leadership (90.91%).

Table 18 depicts Principal M9H2's completed Repertory Grid.

Table 18
Male High School Principal (M9H2): Repertory Grid

	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	
emergent									implicit
Communicative	3	2	3	3	3	2	3	3	Secretive
Democratic	2	2	3	0	3	2	3	3	Autocratic
Student-Oriented	3	3	3	3	3	3	3	3	Content-Oriented
Adaptive	3	1	-1	3	3	2	3	3	Rigid
Vision-Big Picture	3	2	-1	3	3	2	3	3	Myopic-Details
Delegate	3	1	-1	2	3	3	2	2	Workaholic
Passion	3	1	3	3	3	2	3	3	Apathy
Challenging	3	1	0	3	3	2	3	2	Easy
School-Based	3	1	2	3	3	3	3	3	Downtown-Based
Seamless	3	0	3	3	3	3	2	3	Choppy
Spiritual	0	-1	0	0	2	1	0	1	Secular
Multifaceted	2	1	2	3	3	2	3	2	Simple
Inclusive	3	1	3	3	3	2	2	3	Exclusive
Built	2	1	1	3	3	2	2	3	Mandated
Cooperative	2	1	1	3	3	2	2	2	Hindersome
Resourceful	2	3	1	3	3	2	2	2	Unimaginative
Empower	3	1	1	1	3	2	3	2	Weaken
Time Autonomy	2	1	1	2	3	2	2	2	Time Constraints
Fun	2	0	0	2	2	1	2	2	Boring
Potential	2	2	0	3	3	2	3	2	Actualized
Persistence	2	2	2	1	3	3	2	3	Lack of Persistence
Change	3	1	1	3	3	2	2	3	Status Quo

Options for Rating: 3=Very Desirable; 2=Desirable; 1=Fairly Desirable; 0=Does not apply; -1=Less Desirable; -2=Not Desirable; -3=Strongly Not Desirable

Research Question Two

Research question two asked: Are there patterns in the data that suggest differences related to gender? To address research question two, each grid was decomposed into different sources of variation using a Generalized Procrustes Analysis format to develop consensus grids for gender by computing the ratings for the constructs and elements. Then, a Generalized Procrustes Analysis was conducted separately for females and males. The Generalized Procrustes Analysis identified trends in the data as well as areas of agreement. A Principal Components Analysis was then conducted on the results from the Generalized Procrustes Analysis to identify correlation related to gender. Grid labels are to be interpreted as follows:

1. All grid labels beginning with *F* represent females and all grid labels beginning with *M* represent males.
2. All grid labels with the second letter of *E* represent elementary school level of assignment, with the second letter of *M* represent middle school level of assignment, and with the second letter of *H* represent high school level of assignment.
3. All grid labels beginning with *E* represent elementary school level of assignment, beginning with *M* represent middle school level of assignment, and beginning with *H* represent high school level of assignment.

Generalized Procrustes Analysis: Gender

To obtain a baseline consensus proportion, a Generalized Procrustes Analysis was conducted on each of the sixteen grids. To address research questions two, each grid was

decomposed into different sources of variation using a Generalized Procrustes Analysis format to develop consensus grids for gender by computing the ratings for the constructs and elements. Then, a Generalized Procrustes Analysis was conducted separately for females and males. The Generalized Procrustes Analysis identified trends in the data as well as areas of agreement by describing the variability in the scaled, rotated grids in an Analysis of Variance (ANOVA) form. The Generalized Procrustes Analysis automatically scales all of the grid values so that their total sum of squares equals some value; the default value of the sum of squares in Idiogrid software is equal to 100 (Grice, 2002). When set to 100, most of the values in the ANOVA output can be interpreted as percentages of the total variation among the grids. Having the ANOVA output scaled in this manner enhances the interpretation of the results and facilitates comparing results across grids. To achieve this scaling, Idiogrid software computes a value referred to as the Lambda Scaling Factor in which every value in each grid is then multiplied by Lambda prior to the analysis so that the total sum of squares for the grids will equal the Total Sum of Squares Value set by the default of 100. When the analysis is completed, the values are then divided by Lambda.

Table 19 depicts the analyses of all sixteen grids to indicate similarity in the configurations of the elements across the grids for gender. The consensus proportion ranged from 0 (no similarity) to 1.0 (perfect similarity). The analysis revealed a value of .8925 indicating a fairly high consensus for all elements.

Table 19
Generalized Procrustes Analysis: Gender

Grids Analyzed (16)

F1E6, F2E7, F3E8, F4E9, F5E10, F6M3, F7M4, M1E1, M2E2, M3E3, M4E4, M5E5, M6M1, M7M2, M8H1, M9H2

Lambda Scaling Factor

SS Value: 100

Lambda: 0.08

Note: Prior to analysis, the values in each grid were multiplied by Lambda.

Iteration History

1: -73.06571240695209

2: -73.25028551165772

3: -73.25189068981096

4: -73.25191039833416

ANOVA Source Table for Matched Figures: Gender

Figures	Consensus	Residual	Total
Curriculum	12.80	1.17	13.98
Finance	6.20	1.93	8.13
Law	4.59	1.67	6.25
Technology	10.08	1.83	11.92
Leadership	16.57	0.70	17.27
Management	11.81	1.06	12.87
Personnel	13.64	1.33	14.97
Communication	13.56	1.05	14.62
Total SS	89.25	10.75	100.00

Principal Components Analysis: Gender

To identify correlations related to gender, a Principal Components Analysis was conducted on the findings from the Generalized Procrustes Analysis. Figure 3 graphically depicts the Principal Components Analysis to illustrate the relationship between the constructs and the elements. A similarity was indicated in females (Principal F2, Principal F3, Principal F3, Principal F5, Principal F6, and Principal F7) with the

exception of Principal F1 who differed as a result of rating choices. The males were spread out vertically with the exception of Principal M2 who differed as a result of rating choices.

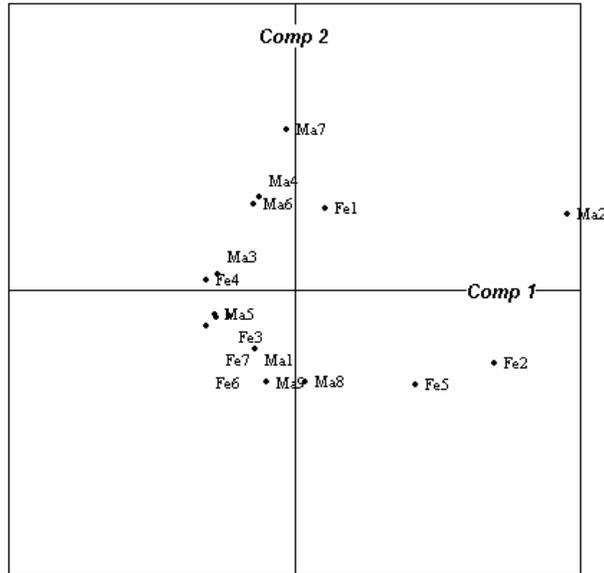


Figure 3: Principal Components Analysis (Correlations) for Procrustes Statistics - Gender

Generalized Procrustes Analysis: Females

A Generalized Procrustes Analysis was conducted separately for females. The Generalized Procrustes Analysis automatically scales all of the grid values so that their total sum of squares equals some value; the default value of the sum of squares in Idiogrid software is equal to 100(Grice, 2002). When set to 100, most of the values in the ANOVA output can be interpreted as percentages of the total variation among the grids. Having the ANOVA output scaled in this manner enhances the interpretation of the

results and facilitates comparing results across grids. To achieve this scaling, Idiogrid software computes a value referred to as the Lambda Scaling Factor in which every value in each grid is then multiplied by Lambda prior to the analysis so that the total sum of squares for the grids will equal the Total Sum of Squares Value set by the default of 100. When the analysis is completed, the values are then divided by Lambda.

For females, Table 20 depicts the analyses indicating a high consensus Generalized Procrustes Analysis identified trends in the data as well as areas of proportion of .9162 (Maximum = 1.0). An examination of the residuals to judge relative magnitude and identify particularly high (~.30) or low values indicated that that females agreed least in their ratings of finance and law and most in their ratings of leadership. The residuals indicated that Principal F1E6 and Principal F2E7 were most disparate from the consensus grid with F6M3 most similar to the consensus grid. Specific points of deviation can be noted on the consensus grid; note the large values for Principal F1E6 and Principal F2E7 for finance and law. Principal F2E7 deviated from the consensus on technology and communication as well.

Table 20
Generalized Procrustes Analysis: Females

Grids Analyzed (7)

F1E6, F2E7, F3E8, F4E9, F5E10, F6M3, F7M4

Lambda Scaling Factor

SS Value: 100

Lambda: 0.12

Note: Prior to analysis, the values in each grid were multiplied by Lambda.

Iteration History

1: -84.35561212815669

2: -84.61882224146927

3: -84.62174087119341

4: -84.62177406894327

ANOVA Source Table for Matched Figures: Females

Figures	Consensus	Residual	Total
Curriculum	12.34	0.92	13.25
Finance	7.08	1.89	8.97
Law	5.83	1.53	7.37
Technology	10.81	1.15	11.97
Leadership	16.37	0.50	16.87
Management	11.91	0.77	12.68
Personnel	14.15	0.78	14.93
Communication	13.12	0.84	13.96
Total SS	91.62	8.38	100.00

Principal Components Analysis: Females

A Principal Components Analysis was conducted separately for females on the consensus grid, the average grid computed from the rotated original. Figure 4 graphically depicts the Principal Components Analysis to illustrate the relationship between the constructs and the elements. The fourth component is comprised of democratic and spiritual. For the females, these two constructs correlated highly with one another (thus loading on a component together) and distinctly from the other constructs.

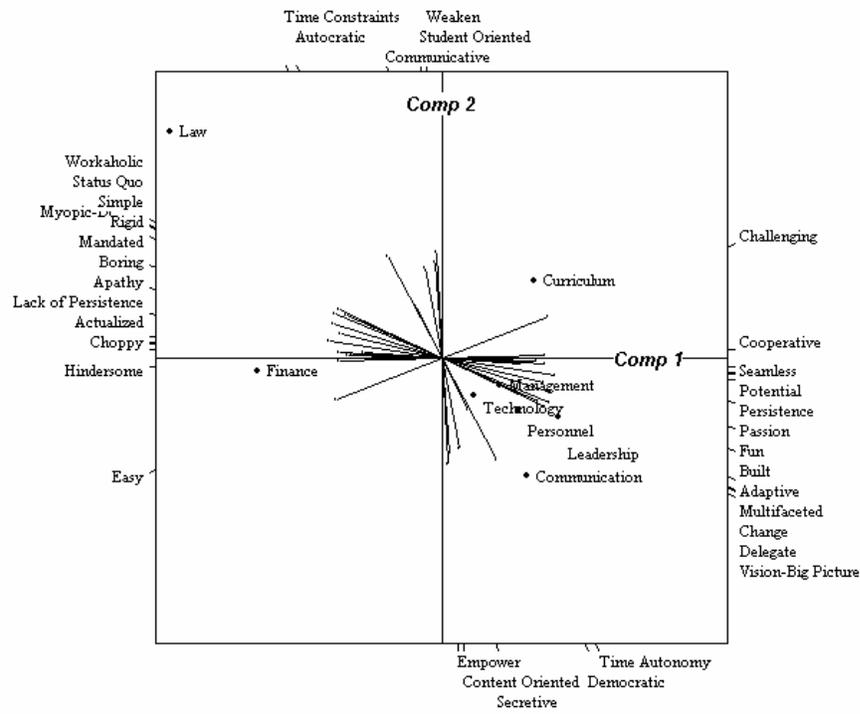


Figure 4: Principal Components Analysis (Correlations) for Consensus - Females

Generalized Procrustes Analysis: Males

A Generalized Procrustes Analysis was also conducted separately for males. The Generalized Procrustes Analysis identified trends in the data as well as areas of agreement by describing the variability in the scaled, rotated grids in an Analysis of Variance (ANOVA) form. The Generalized Procrustes Analysis automatically scales all of the grid values so that their total sum of squares equals some value; the default value of the sum of squares in Idiogrid software is equal to 100 (Grice, 2002). When set to 100, most of the values in the ANOVA output can be interpreted as percentages of the total variation among the grids. Having the ANOVA output scaled in this manner enhances the

interpretation of the results and facilitates comparing results across grids. To achieve this scaling, Idiogrid software computes a value referred to as the Lambda Scaling Factor in which every value in each grid is then multiplied by Lambda prior to the analysis so that the total sum of squares for the grids will equal the Total Sum of Squares Value set by the default of 100. When the analysis is completed, the values are then divided by Lambda.

For males, Table 21 depicts the analyses indicating a consensus proportion of .8806 (Maximum = 1.0) that was also high, but lower than the value for the females (.9162). Technology was the area of greatest disparity with leadership (similar to the females) the greatest point of agreement. Principal M3E3 and Principal M5E5 were most similar to the consensus grid with Principal M2E2 departing most from the consensus grid, followed by Principal M7M2. Most of the disagreement on technology came from Principal M2E2, although most of the others deviated from the consensus to some extent.

Table 21
Generalized Procrustes Analysis: Males

Grids Analyzed (9)

M1E1, M2E2, M3E3, M4E4, M5E5, M6M1, M7M2, M8H1, M9H2

Lambda Scaling Factor

SS Value: 100

Lambda: 0.12

Note: Prior to analysis, the values in each grid were multiplied by Lambda.

Iteration History

1: -78.73222184608171

2: -79.06103244307222

3: -79.06462711804885

4: -79.06466978253566

ANOVA Source Table for Matched Figures: Males

Figures	Consensus	Residual	Total
Curriculum	13.29	1.39	14.67
Finance	5.56	1.77	7.32
Law	3.68	1.51	5.19
Technology	9.55	2.33	11.87
Leadership	16.86	0.79	17.65
Management	11.81	1.24	13.05
Personnel	13.29	1.71	15.00
Communication	14.04	1.20	15.24
Total SS	88.06	11.94	100.00

Principal Components Analysis: Males

A Principal Components Analysis was also conducted separately for males on the consensus grid, the average grid computed from the rotated original. Figure 5 graphically depicts the Principal Components Analysis to illustrate the relationship between the constructs and the elements. The ways the males and females see the constructs as related are apparently different especially in the how the males saw spiritual, delegate, empower, and persistence as related; whereas the females saw spiritual as primarily related to

democratic. Spiritual for males also loads on the second strongest component, whereas for females it was on the 4th and weakest component.

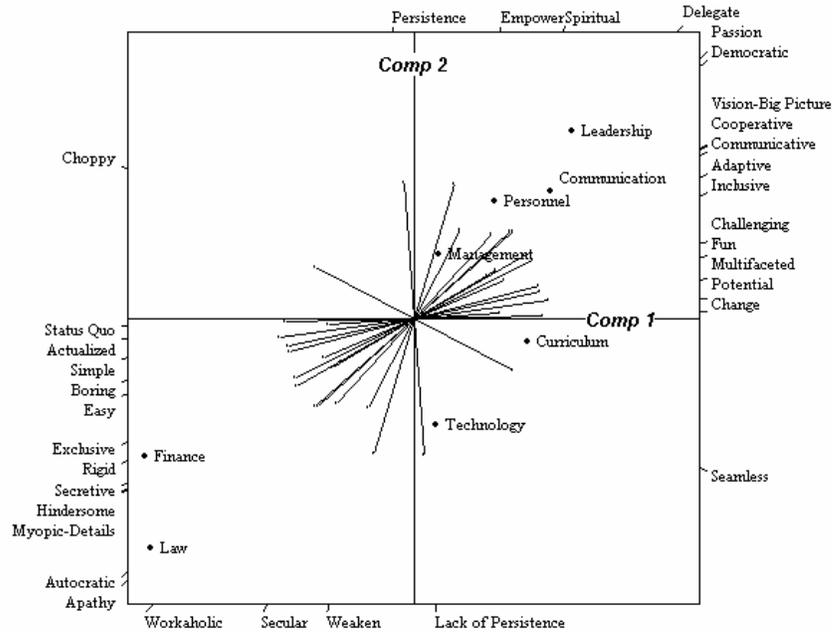


Figure 5: Principal Components Analysis (Correlations) for Consensus - Males

Research Question Three

Research question three stated: Are there patterns in the data that suggest differences related to level of assignment? To address research question three, each grid was decomposed into different sources of variation using a Generalized Procrustes Analysis format to develop consensus grids for gender by computing the ratings for the constructs and elements. Then, a Generalized Procrustes Analysis was conducted separately for elementary, middle, and high school principals. The Generalized Procrustes Analysis identified trends in the data as well as areas of agreement. A

Principal Components Analysis was then conducted on the results from the Generalized Procrustes Analysis to identify correlation related to level of assignment. Grid labels are to be interpreted as follows:

1. All grid labels beginning with *F* represent females and all grid labels beginning with *M* represent males.
2. All grid labels with the second letter of *E* represent elementary school level of assignment, with the second letter of *M* represent middle school level of assignment, and with the second letter of *H* represent high school level of assignment.
3. All grid labels beginning with *E* represent elementary school level of assignment, beginning with *M* represent middle school level of assignment, and beginning with *H* represent high school level of assignment.

Generalized Procrustes Analysis: Level of Assignment

To obtain a baseline consensus proportion, a Generalized Procrustes Analysis was conducted on each of the sixteen grids. To address research questions two, each grid was decomposed into different sources of variation using a Generalized Procrustes Analysis format to develop consensus grids for level of assignment by computing the ratings for the constructs and elements. Then, a Generalized Procrustes Analysis was conducted separately for elementary, middle, and high school principals. The Generalized Procrustes Analysis identified trends in the data as well as areas of agreement by describing the variability in the scaled, rotated grids in an Analysis of Variance (ANOVA) form. The Generalized Procrustes Analysis automatically scales all of the grid values so that their total sum of squares equals some value; the default value of the sum

of squares in Idiogrid software is equal to 100 (Grice, 2002). When set to 100, most of the values in the ANOVA output can be interpreted as percentages of the total variation among the grids. Having the ANOVA output scaled in this manner enhances the interpretation of the results and facilitates comparing results across grids. To achieve this scaling, Idiogrid software computes a value referred to as the Lambda Scaling Factor in which every value in each grid is then multiplied by Lambda prior to the analysis so that the total sum of squares for the grids will equal the Total Sum of Squares Value set by the default of 100. When the analysis is completed, the values are then divided by Lambda.

Table 22 depicts the analyses of all sixteen grids to indicate similarity in the configurations of the elements across the grids for level of assignment. The consensus proportion ranged from 0 (no similarity) to 1.0 (perfect similarity). The analysis revealed a value of .8925 indicating a fairly high consensus for all elements. The Generalized Procrustes Analysis of gender also revealed the same value of .8925.

Table 22
Generalized Procrustes Analysis: Level of Assignment

Grids Analyzed (16)

M1E1, M2E2, M3E3, M4E4, M5E5, F1E6, F2E7, F3E8, F4E9, F5E10, M6M1, M7M2, F6M3, F7M4, M8H1, M9H2

Lambda Scaling Factor

SS Value: 100

Lambda: 0.08

Note: Prior to analysis, the values in each grid were multiplied by Lambda.

Iteration History

1: -73.03661558687634

2: -73.24978870385696

3: -73.25188481906731

4: -73.25191031270757

ANOVA Source Table for Matched Figures: Level of Assignment

Figures	Consensus	Residual	Total
Curriculum	12.80	1.17	13.98
Finance	6.20	1.93	8.13
Law	4.59	1.67	6.25
Technology	10.08	1.83	11.92
Leadership	16.57	0.70	17.27
Management	11.81	1.06	12.87
Personnel	13.64	1.33	14.97
Communication	13.56	1.05	14.62
Total SS	89.25	10.75	100.00

Principal Components Analysis: Level of Assignment

To identify correlations related to level of assignment, a Principal Components Analysis was conducted on the findings from the Generalized Procrustes Analysis. If the principals in the three levels of assignment were similar, they should appear close to one another on the 2-dimensional PCA graph and distinct from the principals in the other groups. Figure 6 graphically depicts the Principal Components Analysis to illustrate the

relationship between the constructs and the elements. The two high school principals, Principal H1 and Principal H2, were very close (clustered) whereas the elementary and middle school principals were spread out (not clustered). Principal E2, Principal E7, and Principal E10 appear to differ from the other 13 grids, which is not surprising given their ratings.

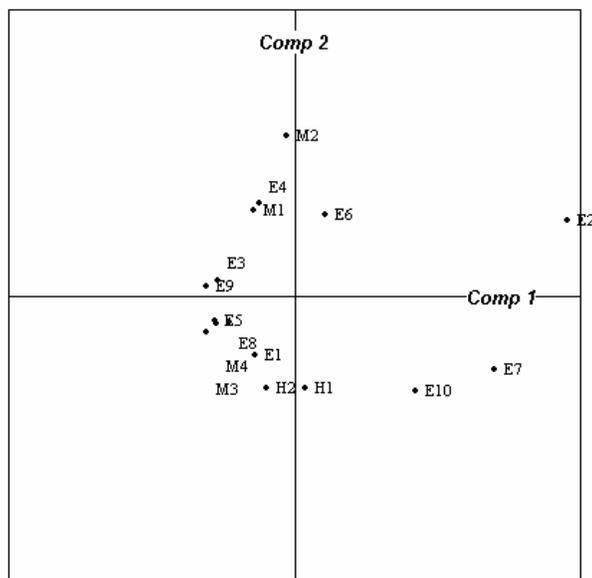


Figure 6: Principal Components Analysis (Correlations) for Procrustes Statistics - Level of Assignment

Generalized Procrustes Analysis: Elementary School Principals

The Generalized Procrustes Analysis identified trends in the data as well as areas of agreement by describing the variability in the scaled, rotated grids in an Analysis of Variance (ANOVA) form. The Generalized Procrustes Analysis automatically scales all

of the grid values so that their total sum of squares equals some value; the default value of the sum of squares in Idiogrid software is equal to 100 (Grice, 2002). When set to 100, most of the values in the ANOVA output can be interpreted as percentages of the total variation among the grids. Having the ANOVA output scaled in this manner enhances the interpretation of the results and facilitates comparing results across grids. To achieve this scaling, Idiogrid software computes a value referred to as the Lambda Scaling Factor in which every value in each grid is then multiplied by Lambda prior to the analysis so that the total sum of squares for the grids will equal the Total Sum of Squares Value set by the default of 100. When the analysis is completed, the values are then divided by Lambda.

Table 23 depicts the Generalized Procrustes Analysis to indicate that the consensus proportion is a fairly high consensus value of .8894. An examination of the residuals indicated that the elementary school principals agreed least with finance, technology, and law and most with leadership (the residuals relative magnitude is judged by particularly high or low values). Principal M2E2 was most disparate from the group, followed by Principal F2E7 and Principal F1E6. Note that Principal M2E2 and Principal F2E7 were two of the grids that differed from the others based on their choice of ratings, so it is not surprising that they are different from the consensus. Principal M2E2, Principal F1E6 and Principal F2E7 differed in their views from the consensus in finance and law. In technology, Principal M2E2, Principal F2E7, and Principal F5E10 contributed most to the residuals.

Table 23
Generalized Procrustes Analysis: Elementary School Principals

Grids Analyzed (10)

M1E1, M2E2, M3E3, M4E4, M5E5, F1E6, F2E7, F3E8, F4E9, F5E10

Lambda Scaling Factor

SS Value: 100

Lambda: 0.10

Note: Prior to analysis, the values in each grid were multiplied by Lambda.

Iteration History

1: -78.68103209532100

2: -78.93470892603985

3: -78.93723008047219

4: -78.93725983515257

ANOVA Source Table for Matched Figures: Elementary School Principals

Figures	Consensus	Residual	Total
Curriculum	12.03	1.27	13.30
Finance	5.95	2.37	8.32
Law	3.69	1.99	5.69
Technology	9.08	2.13	11.21
Leadership	16.85	0.51	17.36
Management	12.17	1.07	13.24
Personnel	15.14	0.82	15.96
Communication	14.03	0.91	14.94
Total SS	88.94	11.06	100.00

Principal Components Analysis: Elementary School Principals

A Principal Components Analysis was conducted separately for elementary school principals on the consensus grid, the average grid computed from the rotated original. Figure 7 graphically depicts the analyses to illustrate the relationship between the constructs and the elements. As with the gender analyses, the structure coefficients in the level of assignment analyses were organized according to the largest (in absolute magnitude) values. The first component is comprised of many different constructs. The

2nd, 3rd, and 4th components are made up of only a few constructs. The 4th, for instance, is spiritual and persistence. Passion also correlated somewhat with this 4th component. It is interesting that the 3rd component pits challenging and communicative against empower. The 2nd component pits student oriented against resourceful.

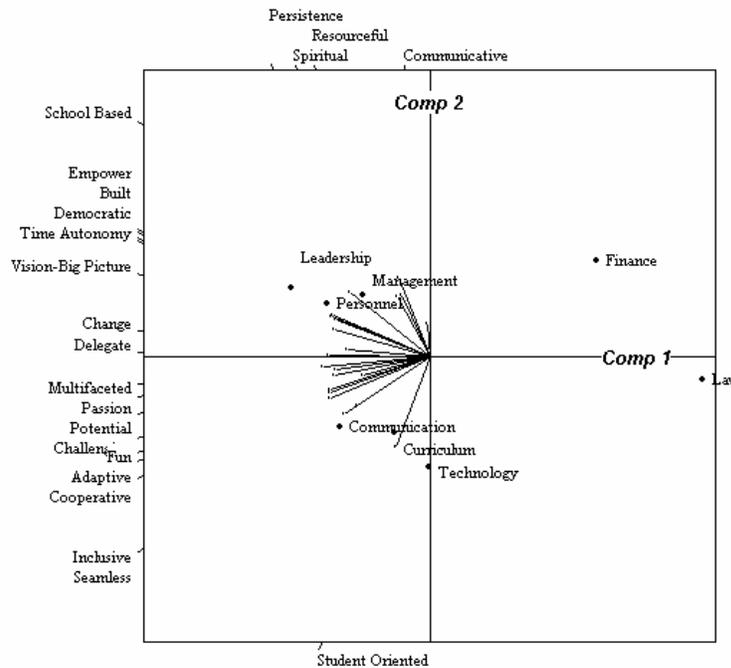


Figure 7: Principal Components Analysis (Correlations) for Consensus - Elementary School Principals

Generalized Procrustes Analysis: Middle School Principals

The Generalized Procrustes Analysis identified trends in the data as well as areas of agreement by describing the variability in the scaled, rotated grids in an Analysis of Variance (ANOVA) form. The Generalized Procrustes Analysis automatically scales all of the grid values so that their total sum of squares equals some value; the default value

of the sum of squares in Idiogrid software is equal to 100 (Grice, 2002). When set to 100, most of the values in the ANOVA output can be interpreted as percentages of the total variation among the grids. Having the ANOVA output scaled in this manner enhances the interpretation of the results and facilitates comparing results across grids. To achieve this scaling, Idiogrid software computes a value referred to as the Lambda Scaling Factor in which every value in each grid is then multiplied by Lambda prior to the analysis so that the total sum of squares for the grids will equal the Total Sum of Squares Value set by the default of 100. When the analysis is completed, the values are then divided by Lambda.

Table 24 depicts the Generalized Procrustes Analysis to indicate that the consensus proportion is higher (.9334) for the middle school principals than for the elementary school principals. The residuals showed that they agreed least on finance and personnel and most on management. Principal M7M2 was the one principal who differed from the consensus (average) grid. In the area of finance, it appears that Principal M7M2 contributed most to the total residual, Principal F7M4 contributed to a lesser extent. In the area of personnel, it is clearly Principal M7M2 who is different, Principal F6M3 next to a lesser extent.

Table 24
Generalized Procrustes Analysis: Middle School Principals

Grids Analyzed (4)
M6M1, M7M2, F6M3, F7M4

Lambda Scaling Factor
SS Value: 100
Lambda: 0.20

Note: Prior to analysis, the values in each grid were multiplied by Lambda.

Iteration History
1: -88.50653531735308
2: -89.33060873664178
3: -89.34021693666591
4: -89.34037232672964
5: -89.34037432693962

ANOVA Source Table for Matched Figures: Middle School Principals

Figures	Consensus	Residual	Total
Curriculum	17.26	0.68	17.94
Finance	6.84	1.17	8.02
Law	5.93	0.63	6.56
Technology	11.67	0.88	12.55
Leadership	16.62	0.71	17.33
Management	11.27	0.47	11.74
Personnel	10.87	1.39	12.27
Communication	12.88	0.72	13.60
Total SS	93.34	6.66	100.00

Principal Components Analysis: Middle School Principals

A Principal Components Analysis was conducted separately for middle school principals on the consensus grid, the average grid computed from the rotated original. For middle school, Figure 8 graphically depicts the analyses to illustrate the relationship between the constructs and the elements. As with the gender analyses, the structure coefficients in the level of assignment analyses were organized according to the largest (in absolute magnitude) values. The groupings of constructs are quite different for the

middle school principals than for the elementary school principals. For example, empower and time autonomy made up one component and fun correlated with this component to some extent as well.

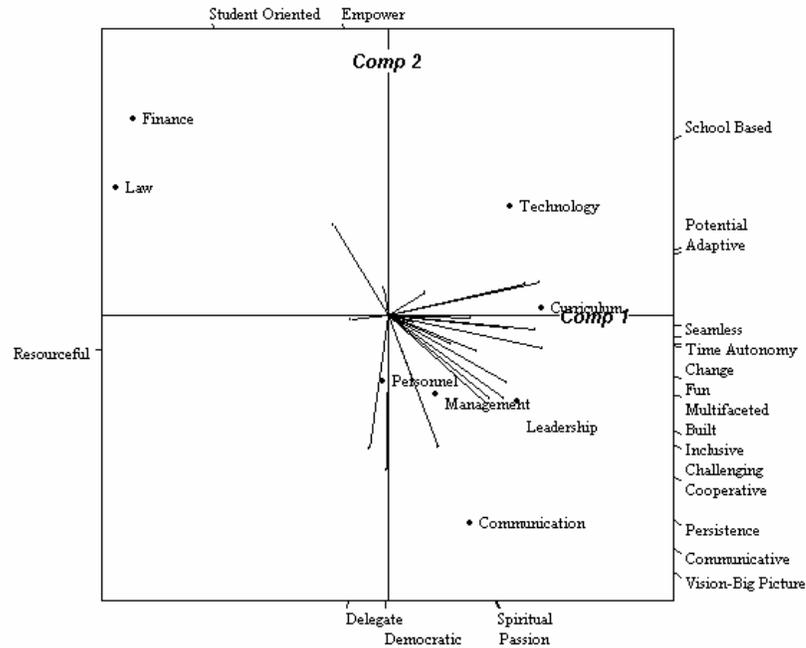


Figure 8: Principal Components Analysis (Correlations) for Consensus - Middle School Principals

Generalized Procrustes Analysis: High School Principals

The Generalized Procrustes Analysis identified trends in the data as well as areas of agreement by describing the variability in the scaled, rotated grids in an Analysis of Variance (ANOVA) form. The Generalized Procrustes Analysis automatically scales all of the grid values so that their total sum of squares equals some value; the default value of the sum of squares in Idiogrid software is equal to 100 (Grice, 2002). When set to 100,

most of the values in the ANOVA output can be interpreted as percentages of the total variation among the grids. Having the ANOVA output scaled in this manner enhances the interpretation of the results and facilitates comparing results across grids. To achieve this scaling, Idiogrid software computes a value referred to as the Lambda Scaling Factor in which every value in each grid is then multiplied by Lambda prior to the analysis so that the total sum of squares for the grids will equal the Total Sum of Squares Value set by the default of 100. When the analysis is completed, the values are then divided by Lambda.

Table 25 depicts the Generalized Procrustes Analysis to indicate that the two high school principals were very close (clustered) whereas the elementary and middle school principals were spread out (not clustered). Principal M2E2, Principal F2E7, and Principal F5E10 appear to differ from the other 13 grids, which is not surprising given their ratings. The consensus proportion is very high with a value of .9879. The two high school principals, Principal M8M1 and Principal M9H2, agreed very highly in their ratings. The residuals are all fairly low. The highest point of disagreement is in the area of finance.

Table 25
Generalized Procrustes Analysis: High School Principals

Grids Analyzed (2)
M8H1, M9H2

Lambda Scaling Factor
SS Value: 100
Lambda: 0.22

Note: Prior to analysis, the values in each grid were multiplied by Lambda.

Iteration History
1: -96.78858236409665
2: -96.78858229075624

ANOVA Source Table for Matched Figures: High School Principals

Figures	Consensus	Residual	Total
Curriculum	12.19	0.23	12.43
Finance	6.96	0.47	7.43
Law	8.27	0.14	8.41
Technology	14.27	0.07	14.35
Leadership	16.79	0.03	16.82
Management	12.35	0.17	12.52
Personnel	13.66	0.03	13.69
Communication	14.29	0.05	14.35
Total SS	98.79	1.21	100.00

Principal Components Analysis: High School Principals

A Principal Components Analysis was conducted separately for high school principals on the consensus grid, the average grid computed from the rotated original. For high school, Figure 9 graphically depicts the analyses to determine two strong components and two weak components. As with the gender analyses, the structure coefficients in the level of assignment analyses were organized according to the largest (in absolute magnitude) values. Persistence and democratic go together and are pitted against communicative. Democratic correlates about equally with communicative and

resourceful sits on its own component, separate from all of the other constructs. On the first component, student oriented stands opposite to adaptive, vision-big picture, delegate, passion, school based, seamless, spiritual, multifaceted, inclusive, built, cooperative, resourceful, empower, time autonomy, fun, potential, persistence, and change.

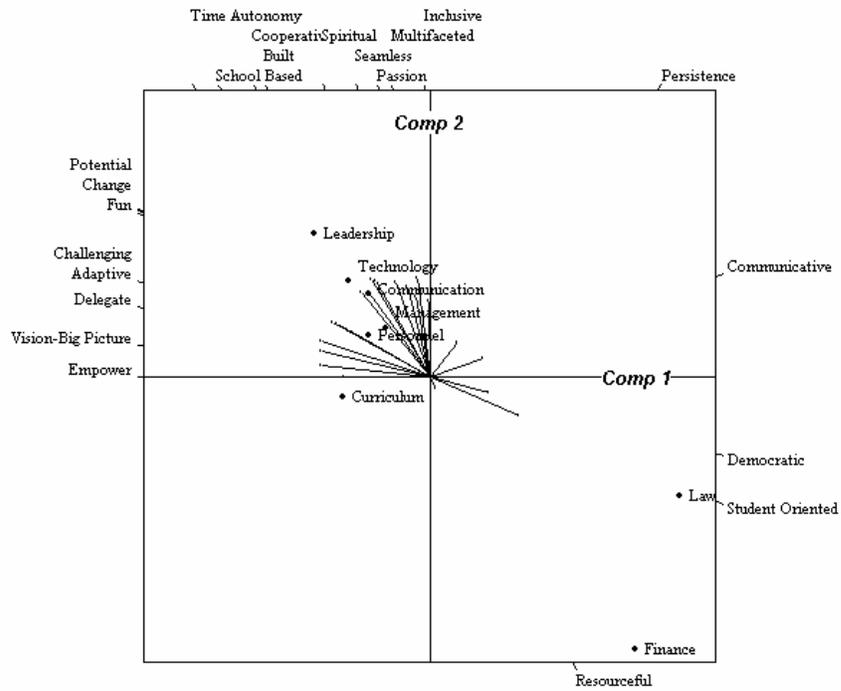


Figure 9: Principal Components Analysis (Correlations) for Consensus - High School Principals

CHAPTER FIVE

CONCLUSION

Summary

The study intended to explore the transparent templates which principals create to anticipate and interpret events with well developed personal constructs that govern their leadership behavior. Patterns in the data to suggest differences related to gender and level of assignment were also considered.

The purpose of this study was to explore the personal constructs of principals through a process designed by Kelly (1955) to reveal how individuals ascribe meaning to their behavior. According to Kelly, these core constructs are essential for the maintenance of a sense of self and the understanding of present and future roles. The criterion for choice of this method was to understand more about the principals' personal meaning of leadership through their engagement in the construing process (Fransella & Dalton, 2000). Participants in this study included sixteen principals in an urban school district that serves over 70,000 students in southwest Florida. The study participants included principals who voluntarily responded to participant solicitation by the researcher in the form of emails and phone calls. Nine male and seven female principals agreed to participate. To maintain confidentiality, specific information regarding the participants was not presented. For ethical reasons, responses were coded in non-identifying ways.

The study explored the research questions through qualitative inquiry. Kelly's (1955) personal construct interview and the Repertory Grid technique were used to collect data in this exploration. The validity and reliability of Kelly's personal construct

methodology has been established in numerous studies since its inception. This study began with full context elicitation, laddering, and triadic analysis, and proceeded to full grid completion. Through engaging in this interactive process, principals experienced a thorough, objective, and productive way to express through language the meaning they ascribe to their leadership behavior. The full grid analysis of data revealed that principals anticipate and interpret events with well developed personal constructs that govern their thoughts, words, and actions.

Two interviews with each principal were conducted to elicit personal constructs and Repertory Grid test completion. The data collected in this study was analyzed using Idiogrid software (Grice, 2002) to provide examination of responses and manage data throughout analysis. All data were organized in spreadsheets that dealt with textual as well as numeric data in a structured way to allow for easy access to clarify Repertory Grid technique. This provided options to change coding and make other adjustments where it was necessary so that results could be reported in an ethical manner.

To address research question one, descriptive statistics were computed for the elicited constructs and for summarizing grid data to describe the characteristics of each grid. An Extremity in Ratings Analysis was also conducted to provide additional insight into construct and element extremities for each participant. High percentages in the Extremity in Ratings Analysis led to assumptions related to the constructs and elements that participant's used in their transparent templates. To address research questions two and three, each grid was decomposed into different sources of variation using a Generalized Procrustes Analysis format to develop consensus grids for gender and level of assignment by computing the ratings for the constructs and elements. The Generalized

Procrustes Analysis identified trends in the data as well as areas of agreement. A Principal Components Analysis was then conducted on the results from the Generalized Procrustes Analysis to identify correlations related to gender and level of assignment. At the conclusion of the study, each participant received an individualized analysis that included a graphic display of ratings, descriptive statistics, and a narrative summarizing the findings of the study.

The findings from the study did address the research questions and may result in an increased awareness level in the professional community of the meaning that principals ascribe to their leadership behavior. Additionally, the positive experiences throughout the study indicated that an adaptation of Kelly's (1955) process to principal leadership preparation and professional development programs may be an appropriate way to develop more self-aware, productive, and effective principals (Petri, Lindauer, & Tountasakis, 2000).

Research can be found on the early years of the principals' career (Daresh, 2001), stages in the careers of principals (Day & Bakioglu, 1996), and on the succession of principals (Hart, 1993). Limited attention has previously been given to the meaning that principals ascribe to their leadership behavior. The results of this study support that the focused interest on principal leadership needs to go beyond descriptive studies, mandates, and competency lists to seek the meaning that principals ascribe to their thoughts, words, and actions (Krug, Ahadi, & Scott, 1990).

Findings

This section summarizes the findings related to the three research questions asked in the study.

Research Question One

Research question one dealt with the transparent templates principals create and attempt to fit over the realities of which their world is composed. The findings from the analyses of data collected throughout the course of two interviews support that principals do create and attempt to fit distinct transparent templates over the realities of which their world is composed.

While all the participants varied in their responses, descriptive statistics indicated that Principal F2E7 and Principal F5E10 generally rated with scale values of +3, Principal M2E2 rated with scale values of either +3 or 0, and Principal M6M1 rated with the scale value of 0 for the majority of responses.

Significant participants' comments made during the construct elicitation were included. These comments revealed the conversations that transpired during the first interview relative to the meaning principals ascribe to the constructs. Three main themes of student oriented, resourceful, and communicative emerged in analyzing the completed Repertory Grids to determine the constructs principals focus on. An Extremity of Ratings Analysis showed that all participants included student oriented in their templates. An Extremity of Ratings Analysis showed that Principal M1E1, Principal M2E2, Principal M3E3, Principal M4E4, Principal M5E5, Principal F1E6, Principal F2E7, Principal F3E8, Principal F5E10, Principal M6M1, Principal M7M2, Principal F6M3, and Principal M8H1 included resourceful in their templates. An Extremity of Ratings Analysis showed that Principal M1E1, Principal M2E2, Principal M3E3, Principal M5E5, Principal F1E6, Principal F2E7, Principal F3E8, Principal F4E9, Principal M6M1, Principal F6M3, Principal M8H1, and Principal M9H2 included communicative in their templates. Above moderate rankings that emerged in the analyses were in the constructs

of school based (11), adaptive (10), passion (9), challenging (8), empower (8), persistence (8). Moderate rankings were found in the constructs of inclusive (7), cooperative (7), potential (7), and change (7). Below moderate rankings were found in the constructs of seamless (5), multifaceted (5), fun (5), delegate (4). Low rankings were found in the constructs of built (3) and time autonomy (3) with the lowest rating found in the construct of spiritual (3).

One main theme of leadership emerged in analyzing the completed Repertory Grids to determine the elements principals focus on. An Extremity of Ratings Analysis showed that Principal M2E2, Principal M3E3, Principal M4E4, Principal M5E5, Principal F1E6, Principal F2E7, Principal F3E8, Principal F4E9, Principal F5E10, Principal F6M3, Principal F7M4, Principal M8H1, and Principal M9H2 ranked the element of leadership high with a range in percentages from 50 percent to 100 percent. Principal M2E2, Principal F7M4, Principal M6M1, and Principal F4E9 ranked curriculum as an element they focused on. Principal M2E2, Principal M4E4, Principal M5E5, Principal F1E6, Principal F5E10, and Principal M8H1 ranked personnel as an additional focus. Principal M8H1, Principal M1E1, Principal F2E7, and Principal M7M2 ranked technology as an additional focus. Principal M1E1, Principal M2E2, Principal M8H1, and Principal F2E7 ranked communication as an additional focus. Principal M2E2 and Principal M8H1 ranked management as an additional focus. None of the participants identified finance or law as elements they focused on.

Research Question Two

Research question two dealt with patterns in the data to suggest differences related to gender. Patterns in the data support a finding that there were differences related

to gender. The Generalized Procrustes Analysis for gender revealed a value of .8925 indicating a fairly high consensus.

A Principal Components Analysis was conducted on the findings from the Generalized Procrustes Analysis for gender. The Principal Components Analysis indicated similarity in females (Principal F2E7, Principal F3E8, Principal F3E9, Principal F5E10, Principal F6M3, and Principal F7M4) with the exception of Principal F1E6 who differed as a result of rating choices. The males were spread out vertically with the exception of Principal M2E2 who differed as a result of rating choices.

A Generalized Procrustes Analysis was conducted separately for females. For females, the analyses indicated a high consensus proportion of .9162 (Maximum = 1.0). An examination of the residuals to judge relative magnitude and look for particularly high (~.30) or low values indicated that that females agreed least in their ratings of finance and law and most in their ratings of leadership.

A Principal Components Analysis was conducted separately for females on the consensus grid, the average grid computed from the rotated original. For females, the two constructs of democratic and spiritual correlated highly with one another (thus loading on a component together) and distinctly from the other constructs.

A Generalized Procrustes Analysis was conducted separately for males. For males, the analyses indicated a consensus proportion of .8806 (Maximum = 1.0) that was also high, but lower than the value for the females (.9162). Technology was the area of greatest disparity with leadership (similar to the females) the greatest point of agreement.

A Principal Components Analysis was conducted separately for males on the consensus grid, the average grid computed from the rotated original. The ways the males

and females saw the constructs as related were apparently different especially in the how the males saw spiritual, delegate, empower, and persistence as related; whereas the females saw spiritual as primarily related to democratic. Spiritual for males also loads on the second strongest component, whereas for females it was on the 4th and weakest component.

Research Question Three

Research question three dealt with patterns in the data to suggest differences related to level of assignment. Patterns in the data support a finding that there were differences related to level of assignment. The Generalized Procrustes Analysis of level of assignment revealed a value of .8925 indicating a fairly high consensus.

A Principal Components Analysis was conducted for level of assignment on the consensus grid, the average grid computed from the rotated original. For level of assignment, the analysis indicated that the two high school principals were very close (clustered) whereas the elementary and middle school principals were spread out (not clustered). Three elementary school principals appeared to differ from the thirteen other participants as a result of their choice in ratings.

The Generalized Procrustes Analysis of elementary school principals revealed a value of .8894 indicating a fairly high consensus. An examination of the residuals indicated that the elementary principals agreed least with finance, technology, and law and most with leadership.

A Principal Components Analysis was conducted separately for elementary school principals on the consensus grid, the average grid computed from the rotated original. For elementary school principals, the analyses determined two strong

components and two weak components. The first component was comprised of many different constructs. The 2nd, 3rd, and 4th components were made up of only a few constructs. The 4th, for instance, was spiritual and persistence. Passion also correlated somewhat (.46) with this 4th component. It was interesting that the 3rd component pitted challenging and communicative against empower. The 2nd component pitted student oriented against resourceful.

The Generalized Procrustes Analysis indicated a higher consensus proportion for the middle school principals, with a value of .9334, than for the elementary school principals. The residuals showed that they agreed least with finance and personnel and most with management.

A Principal Components Analysis was conducted separately for middle school principals on the consensus grid, the average grid computed from the rotated original. For middle school, the analyses determined two strong components and two weak components. The groupings of constructs were quite different for the middle school principals than for the elementary school principals. For example, empower and time autonomy made up their own component and fun correlated with this component to some extent as well (.51).

The Generalized Procrustes Analysis revealed a very high consensus proportion with a value of .9879 for the high school principals. The two high school principals, Principal M8M1 and Principal M9H2, agreed very highly in their ratings.

A Principal Components Analysis was conducted separately for high school principals on the consensus grid, the average grid computed from the rotated original. For high school, the analyses determined two strong components and two weak components.

Persistence and democratic go together and are pitted against communicative.

Democratic correlated about equally with communicative (.50) and resourceful sat on its own component, separate from all of the other constructs. On the first component, student oriented stood opposite to adaptive, vision-big picture, delegate, passion, school based, seamless, spiritual, multifaceted, inclusive, built, cooperative, resourceful, empower, time autonomy, fun, potential, persistence, and change.

Conclusions

The Extremity in Ratings Analysis indicated the highest ranked constructs were student oriented, resourceful, and communicative. This finding suggested that principals are cognizant of the importance of securing resources and communicating with stakeholders while remaining oriented on the most important stakeholders in education, the students. Above moderate rankings that emerged in the analyses were in the constructs of school based, adaptive, passion, challenging, empower, and persistence may reflect the current social and political climate for education that has placed unprecedented demands on the principal in the areas of accountability and responsibility. Additionally, above moderate rankings in the constructs of challenging, empower, and persistence may illustrate the skill set principals identify as crucial to the role. Below moderate rankings in the constructs of inclusive, cooperative, potential, and change could epitomize the rhetoric that principals have been bombarded with in contemporary literature and staff development seminars. The below moderate rankings in the constructs of seamless, multifaceted, fun, and delegate may indicate the principals' reality of meeting the challenges in the role. Low rankings in the constructs of built and time autonomy may relate to the principals' perception of imposed constraints. The lowest ranked construct of

spiritual could indicate that principals' view their identity in the role as separate from their personal identity.

The highest ranked element of leadership may highlight the importance principals' place on this competency. The elements of curriculum, personnel, technology, and communication garnered rankings as an additional focus which may indicate that the principals believe that expertise is required in these competencies. Two principals ranked management as an additional focus which could reflect the time period in which they were trained since both have enjoyed long careers in the role of principal. Even though none of the participants identified finance or law as elements they focus on, the participants commented that these were the areas where they experienced the most impact on their role in the form of mandate and policy. Throughout the course of the two interviews, the principals referred to No Child Left Behind Act (NCLB) as *Nickelby* and stated that this mandated legislation created the most challenges for them in terms of increased accountability and responsibility. On January 8, 2002, President Bush signed the NCLB Act which reauthorized the Elementary and Secondary Education Act (ESEA). NCLB increased accountability, increased choice for parents and students, increased flexibility in the use of Federal funds, and increased emphasis on reading. Since 2002, Principal F3E8 commented that many principals have opted for early retirement due to the increased accountability that NCLB has imposed on education.

Implications for Educational Leadership

The main implication of this study for educational leadership is that the findings confirm that principals do engage in leadership behavior based on an abundance of

knowledge constructed from a lifetime of personal and professional events. Through engaging in these events, principals build personal constructs to sustain their leadership.

A secondary implication of this study is that principals create transparent templates to govern their leadership behavior that differ according to gender and level of assignment. The findings of this study verify that principals create transparent templates which they attempt to fit over the realities of which their world is composed directly impacting the success of their school.

Further implications of this study for educational leadership were discovered during the course of the first interview in which the participants spontaneously initiated and discussed the additional areas of influential person, staffing, and the most important competency. These additional areas were not included in the study design and not solicited by the researcher. In the area of influential person, each participant shared with the researcher the person or persons they believed had influenced them in their career. While twelve principals mentioned family members as most influential, Principal F6M3, Principal F2E7, Principal M2E2, and Principal F7M4 stated that they owed much of their career success to Dr. Bruce Harter, a former superintendent in the School District of Lee County.

In the area of staffing, Principal F2E7, Principal M7M2, and Principal M2E2 stated that they had completely turned over their staff with the exception of a few remaining individuals from the previous administration. Principal M4E4 turned over staff by fifty percent in the last two years with an emphasis on hiring young, outstanding individuals. Due to budget cuts, Principal F6M3 had to eliminate almost twenty support staff positions and is in the process of slowly turning over staff. Principal M1E1 is

opening a new school with most of the staff in place; fourteen individuals from Principal M1E1's previous school of assignment have elected to follow Principal M1E1 to the new school of assignment. Principal M8H1 is opening a new school with a staff that represents a mix of experienced individuals from inside and outside the school district. Principal M5E5, Principal F3E8, Principal F1E6, and Principal F6M3 have retained most of the original staff that was at the school when they were assigned as principal. Principal F4E9, Principal F3E8, Principal M9H2, Principal F5E10, and Principal F7M4 did not comment on staffing turn over.

In the area of the most important competency, twelve of the participants began the elicitation by showing the researcher the card with the competency they believed to be most important. Principal F2E7, Principal M2E2, Principal M7M2, and Principal M9H2 stated that communication with stakeholders was the most important competency for principals to make an effort to sustain and an absolute must for any successful administrator. Principal M8H1, Principal M4E4, and Principal M1E1 believed that personnel was the most important competency and stressed that excellent people on staff were the key to what makes a school successful. Principal F6M3 chose leadership and communication as equally important competencies and suggested that personnel could be either the greatest asset or the biggest headache. Principal M5E5 selected leadership, personnel, and curriculum as the three most important competencies emphasizing that the principal's role was to delegate responsibility. Principal M6M1 stated that on a personal level, leadership was the most important competency and that there needed to be leaders at all levels to include student leaders, parent leaders, teacher leaders, and administrative leaders. On a professional level, Principal M6M1 stressed that law was an area that the

principal needed to know about. Principal F7M4 identified finance, personnel, and law as presenting a myriad of barriers while identifying curriculum and leadership as the two fun parts of the job. Principal F6M3 mentioned that the shift in finance back to downtown would free up more time to focus on curriculum while Principal F7M4 criticized the shift in finance back to downtown viewing it as a loss of fiscal control. Principal F3E8 indicated that leadership was the most important competency and a concept that flooded the mind with thoughts too numerous to mention in the span of an interview. Principal F4E9, Principal F1E6, Principal F5E10, and Principal F6M3 did not identify any competency as being more important than another.

To determine the reasons behind the challenges of securing participants in this study and better plan for future research, the individuals who voluntarily participated were asked why they chose to get involved in the study. Principal F2E7, Principal M9H2, Principal M1E1, Principal M7M2, and Principal F6M3 are pursuing a doctorate in education and volunteered to help out a colleague in need. Principal F1E6 and Principal F6M3 have earned doctorates and related that they knew firsthand the work involved in doctoral studies. Principal M8H1 has a spouse working on a doctorate and understands the importance of participants' involvement. Principal M6, Principal F3E8, Principal F5E10, Principal M8H1, and Principal F1E6 also wanted to contribute to research that may increase knowledge about the role of principal and to increase personal growth by learning more about leadership from the results of the study. Principal M2E2 believes in an open door policy and puts that belief into practice by accepting all invitations for interviews. Principal M4E4 said that the decision to volunteer was based on having time available to participate since this was the first time that there was no need to interview all

summer to fill vacancies and no summer school on site. Principal M4E4 added that when principals spend their whole day in interviews with prospective staff, the last thing they want to do is sit through another interview. Principal M5E5 and Principal F7M4 volunteered as a result of the researcher's persistence to secure participation through email attempts. Principal M5E5 mentioned that despite numerous requests to participate in studies, the subject of this study aroused curiosity and interest. Principal F4E9 was persuaded to volunteer by a colleague who participated in the study.

When asked their opinion of the low numbers of voluntary participants for this study, the following beliefs were expressed. Principal F3E8 explained that it was not personal and had nothing to do with the study itself. Principal F3E8 went on to share that principals were overwhelmed, tired, and pressed for time due to the increase in accountability in the last two years. Principal F3E8 has noticed many principals opting for early retirement as a result of the stress related to the increase in accountability. Principal M5E5 and Principal F3E8 suggested that principals may have more time available in January; summer is typically a busy time. Principal F2E7 initially commented that principals did not want to get involved in the study due to time constraints. Without a prompt or cue, Principal F2E7 quickly amended the initial statement by adding that most principals stay in their offices all day paying bills or doing other things on line and don't even know the names of the students or the staff. Principal F2E7 believed the real reason behind the low numbers of voluntary participants for this study is that principals did not want their secrets revealed or bad habits exposed. Principal M9H2 stated that the reason behind the low numbers of volunteers was that principals already had enough on their plate and participating in this study was one thing

they could easily move off their plate. Principal M7M2 believed that principals were too caught up in living life and being a principal to volunteer. Principal M4E4 shared that principals received approximately seventy-five emails everyday with most emails trying to sell them something; Principal M4E4 decided to participate in the study based on the researcher's well-written invitation. Principal F7M4's decision to participate was based on persistent emails from the researcher that were described as least intrusive on the many invitations asking to participate in surveys and studies. Principal F7M4 explained that all the principal's emails, phone calls, and written correspondence take a large amount of time to disseminate, so many emails are quickly deleted. Principal F4E9, Principal M6M1, Principal F1E6, Principal F6M3, Principal M8H1, Principal M2E2, Principal F5E10, Principal M1E1, and Principal F6M3 did not express an opinion about why more principals chose not to participate in the study.

Recommendations for Future Research

Patterns in the data support a finding that principals create transparent templates that govern their leadership behavior. Data collected in this study may assist in the design of Repertory Grid tests for use in future research in the leadership behavior of principals. Patterns in the data support a finding that there were differences related to gender. Data collected in this study may support additional studies related to gender differences. Patterns in the data support a finding that there were differences related to level of assignment. Data collected in this study may support further studies related to differences in level of assignment.

Additionally, suggestions for related research include possible extensions of the current study to include principals from different geographical regions. Results from this

research may reveal the influence of geographical region on the personal construct systems that principals build in anticipation and interpretation of events.

Kelly's (1955) personal construct interview and the Repertory Grid technique were used to collect data in this study. The validity and reliability of Kelly's personal construct methodology has been established in numerous studies since its inception yet no previous study has focused on the leadership behavior of principals. Through engaging in the interactive process of full context elicitation, laddering, triadic analysis, and full grid completion, principals experienced a thorough, objective, and productive way to express through language the meaning they ascribe to their leadership behavior. Future research in the leadership behavior of principals using Kelly's personal construct theory and techniques could yield results that contribute to the redesign of the selection process and the professional development of principals.

APPENDIX A

UCF-IRB APPROVAL LETTER



Office of Research & Commercialization

February 23, 2005

Mary Chang
12894 Brynwood Preserve Lane
Naples, FL 34105

Mrs. Chang:

With reference to your protocol entitled, "Transparent Template of Principals" I am enclosing for your records the approved, expedited document of the UCFIRB Form you had submitted to our office.

Please be advised that this approval is given for one year. Should there be any addendums or administrative changes to the already approved protocol, they must also be submitted to the Board. Changes should not be initiated until written IRB approval is received. Adverse events should be reported to the IRB as they occur. Further, should there be a need to extend this protocol, a renewal form must be submitted for approval at least one month prior to the anniversary date of the most recent approval and is the responsibility of the investigator (UCF).

Should you have any questions, please do not hesitate to call me at 407-823-2901.

Please accept our best wishes for the success of your endeavors.

Cordially,

Barbara Ward

Barbara Ward, CIM
IRB Coordinator

APPENDIX B

SCHOOL DISTRICT OF LEE COUNTY APPROVAL LETTER

Mary Chang
Doctoral Candidate
University of Central Florida

March 30, 2005

Dear Ms. Chang:

The School District Research Committee has reviewed your proposal entitled “Transparent Templates of Principals” and approved it with the following condition:

* You provide my office with a copy of your results when completed.

In addition, I will be sending out a message to principals indicating that you will be contacting them about your study. Please let me know when you will be contacting principals.

Thank you for your interest in educational research and the School District of Lee County. If you have any further questions, please do not hesitate to contact me.

Sincerely,

Richard Itzen, Ph. D.
Dept. of Evaluation, Testing, and Research
(239) 335-1448

APPENDIX C

PARTICIPANT SOLICITATION EMAIL

From: Mary Chang
Sent: Wednesday, May 18, 2005 12:02 PM
To: Principal
Subject: District Approved Principal Study

I am a doctoral candidate at the University of Central Florida. I am also an employee of the School District of Lee County currently on leave of absence to complete my dissertation.

As part of my dissertation, I am conducting a study that seeks to go beyond externally imposed descriptions of the leadership behavior of principals, exploring their personal constructs to discover the transparent templates principals create and attempt to fit over the realities of which their world is composed.

I am asking you to participate in this study because you have been identified as a highly successful principal in the Lee County School District, Fort Myers, FL. You will be asked to participate in two interviews each lasting approximately one hour. You will not have to answer any question you do not wish to answer. With your permission, the interviews will be conducted face-to-face at your office. I would like to audiotape the interviews; only I will have access to the tape from the interviews. Your identity will be kept confidential and will not be revealed in written manuscripts. There are no anticipated risks, compensation or other direct benefits to you as a participant in this study. You are free to withdraw your consent to participate and may discontinue your participation in the series of interviews at any time without consequence.

I am attaching four documents for your review prior to scheduling interviews:

1. IRB Approval Letter
2. District Approval Letter
3. Overview of the Study
4. Informed Consent Letter

I will be contacting you by telephone and email within the next few days to schedule interviews with you during the months of June and July. The timing of these interviews took into consideration your busy schedule during the school year and seeks to take advantage of the less hectic summer months.

Thank you for consideration of my request for interviews. If you have any questions or concerns prior to my contact, please don't hesitate to call me at xxx-xxx-xxxx or send me an email at xxxxxxxxxxxxxxxx. I look forward to talking with you soon to schedule the interviews.

Sincerely,
Mary Chang

APPENDIX D

PARTICIPANT SOLICITATION FOLLOW-UP EMAIL

From: Mary Chang
Sent: Wednesday, May 25, 2005 8:47 AM
To: Principal
Subject: Invitation to Participate

Several days ago, I sent you an email inviting you to participate in a District Approved Principal Study I am conducting in Lee County. I truly believe that your participation would greatly enrich the results of this study.

Please send me an email at xxxxxxxxxxxxxxx with a date that is most convenient for you to meet with me. I can meet with you at 9:30 a.m. and the interview will last approximately one hour.

I look forward to hearing from you soon.
Mary Chang

APPENDIX E

FIRST INTERVIEW CONFIRMATION EMAIL

From: Mary Chang
Sent: Wednesday, May 18, 2005 10:54 AM
To: Principal
Subject: District Approved Principal Study-Interview Confirmation

On Tuesday, May 10, 2005 I sent you an email outlining a District Approved Principal Study I am conducting. I called this morning to schedule an interview with you in June to collect data. I am sending you this email to confirm that I will be meeting with you on Wednesday, June 8, 2005 at 9:00 a.m. at your school. Please contact me at xxx-xxx-xxxx or send me an email at xxxxxxxxxxxxxxxx if you have questions or concerns prior to our scheduled interview.

I look forward to meeting with you.
Mary Chang

APPENDIX F

INTERVIEW PREPARATION EMAIL

From: Mary Chang
Sent: Friday, May 27, 2005 5:05 PM
To: Principal
Subject: District Approved Principal Study-Interview Preparation

Thank you once again for agreeing to participate in the District Approved Principal Study. I look forward to our interview scheduled on Wednesday, June 1, 2005 at 9:00 a.m.

Attached please find the Florida Principal Competencies for your review prior to our interview. Please take a moment to consider these competencies and think of important ways in which these competencies are similar to one another, but different. During the interview, we will have a conversation in which I will ask you to compare, contrast, and describe in detail the Florida Principal Competencies. You will be asked to think of a single word or short phrase that describes how competencies are similar to one another but different as we work through the list. Please contact me at xxx-xxx-xxxx or send me an email at xxxxxxxxxxxxxxxx if you have questions or concerns prior to our scheduled interview.

Mary Chang

APPENDIX G

INFORMED CONSENT LETTER

(Date)

Dear (Principal's Name):

I am a doctoral candidate at the University of Central Florida. As part of my dissertation, I am conducting a study that seeks to go beyond externally imposed descriptions of the leadership behavior of principals, exploring their personal constructs to discover the transparent templates principals create and attempt to fit over the realities of which their world is composed.

I am asking you to participate in this study because you have been identified as a highly successful principal in the Lee County School District, Fort Myers, FL. You will be asked to participate in two interviews each lasting approximately one hour. You will not have to answer any question you do not wish to answer. With your permission, the interviews will be conducted face-to-face at your office. I would like to audiotape the interviews; only I will have access to the tape from the interviews. All audiotapes will be destroyed in the presence of a representative from the dissertation committee following the conclusion of my dissertation. Your identity will be kept confidential and will not be revealed in written manuscripts. There are no anticipated risks, compensation or other direct benefits to you as a participant in this study. You are free to withdraw your consent to participate and may discontinue your participation in the series of interviews at any time without consequence.

Questions or concerns about research participants' rights may be directed to the UCF IRB Office, University of Central Florida Office of Research, Orlando Tech Center, 12443 Research Parkway, Suite 207, Orlando, FL 32826. The UCF IRB Office phone number is (407) 823-2901. If you have any questions about this research study, please contact me at (239) 248-4278. Please sign and return this copy of the letter in the enclosed SASE envelope. A second copy will be provided for your records. By signing this letter, you give me permission to report your responses anonymously in the final manuscript to be submitted to my doctoral dissertation advisor, Dr. Jess House and members of my committee. The final manuscript to be submitted to my doctoral dissertation advisor and members of my committee will be incorporated into my dissertation with potential for publication to report and disseminate the findings of this research.

Thank you for your participation in this important research study involving principals in the Lee County School District, Fort Myers, FL.

_____ I have read the procedure described above for the study.

_____ I voluntarily agree to participate in the study described.

_____ I would like to receive a final manuscript submitted to the doctoral dissertation advisor and members of the committee.

_____ I would not like to receive a final manuscript submitted to the doctoral dissertation advisor and members of the committee.

_____ I voluntarily agree that I may be quoted anonymously in the final manuscript to be submitted to my doctoral dissertation advisor and members of my committee which will be incorporated into the dissertation with potential for publication to report and disseminate the findings of this research.

Participant's Signature

Date

APPENDIX H

FLORIDA PRINCIPAL COMPETENCIES: SCHOOL COMMUNICATIONS

(FLORIDA DEPARTMENT OF EDUCATION, 2002)

SCHOOL COMMUNICATIONS

COMMUNICATIONS

A. Knowledge of the communication process

1. Recognize or state the purpose of a particular communication task.
2. Identify techniques for building rapport.
3. Identify effective oral communication skills.
4. Select techniques for developing and enhancing effective communication.
5. Recognize the impact of nonverbal communication.
6. Identify optimal communication conditions.
7. Identify probable reactions to the form and content of communication.

B. Knowledge of the relationship between effective communication and interpersonal relationships

1. Identify the role of communication in building relationships.
2. Recognize appropriate concern for cultural diversity when planning and implementing communications.
3. Recognize sensitive interactions.
4. Identify strategies to encourage and preserve diverse opinions.
5. Select appropriate provisions for feedback in the communication process.
6. Identify elements associated with promoting an individual's self-esteem.

C. Knowledge of the effects one's behavior and decisions have on other individuals and on the culture and climate of groups and organizations

1. Recognize role differences (formal and informal) by position in organizations.
2. Recognize the impact of organizational norms on the communication process.
3. Recognize the role of communication in organizational behavior and change.

D. Knowledge of the purpose, presentation, and management of information

1. Identify procedures for collecting, verifying, and compiling relevant information.
2. Recognize proper interpretation of information.
3. Select and organize information according to the target audience.

E. Knowledge of a variety of communication techniques

1. Identify the appropriate use of technology in the communication process.
2. Select media appropriate to a given situation.
3. Select methods appropriate to a given situation.

F. Knowledge of effective communication skills in school-community relationships

1. Identify information to promote school-community relationships.
2. Assess educational needs and aspirations of the school community.
3. Select strategies to promote community cooperation and partnerships.
4. Select techniques to manage controversial or negative information and/or situations.
5. Select appropriate methods and tools for building public understanding of and support for the school.

G. Ability to write effectively on a topic

1. Demonstrate a sense of purpose.
2. Write in a logical, clear style.
3. Use appropriate grammar and sentence structure.
4. Use language appropriate for the topic and reader.

5. Correctly apply mechanics of writing: spelling, capitalization, and punctuation.
6. Organize written material effectively.
7. Use standard English in written communication.

APPENDIX I

FLORIDA PRINCIPAL COMPETENCIES: SCHOOL MANAGEMENT

(FLORIDA DEPARTMENT OF EDUCATION, 2002)

SCHOOL MANAGEMENT

Leadership Management Personnel

LEADERSHIP

A. Knowledge of basic leadership theories

1. Apply current concepts of leadership (e.g., systems theory, change theory, situational leadership, visionary leadership, transformational leadership, learning organizations).
2. Apply historical leadership theories (e.g., organizational theory, motivational theory, political and social systems theory) to practical situations.

B. Knowledge of basic principles of human motivation

1. Identify strategies to empower constituents in making decisions that affect a school.
2. Identify motivational incentives for increasing performance and satisfaction.

C. Knowledge of group dynamics

1. Identify appropriate leadership actions as they relate to stages of group development.
2. Identify the basic processes used in managing conflict.
3. Identify strategies for achieving creative thinking, problem solving, and group decision making.
4. Select activities that acknowledge the diverse characteristics and abilities of group members.

D. Knowledge of the change process

1. Identify the common components of the change process.
2. Select examples of organizational conditions or leadership actions that create positive attitudes toward change.

E. Knowledge of influences that impact the school

1. Identify internal and external forces and the influence they have on a school.
2. Recognize the appropriate level of sensitivity for leadership actions taken in response to internal or external forces.
3. Identify the processes of educational policy development at the state, local, and school level.
4. Identify ways an educational leader can influence educational policy development at the state, local, and school level.

F. Knowledge of organizing and planning

1. Differentiate between long-term and short-term planning.
2. Select and apply planning techniques for site-based decision making.
3. Identify the purpose of vision and the shared visioning process in planning and organizational development.

MANAGEMENT

A. Knowledge of proactive management

1. Identify the characteristics of proactive management.
2. Analyze organizational problems and select the most appropriate action.
3. Identify the educational leader's role in managing resources.

B. Knowledge of decision-making processes

1. Identify circumstances that call for decisive action.
 2. Select appropriate activities in conducting an information search prior to making any decision.
 3. Analyze gathered data to determine relevant patterns, themes, and options for appropriate action.
 4. Determine appropriate action that is sensitive to the shared visions and values of the school community.
- C. Knowledge of the effect of personal behavior on others both inside and outside the organization
1. Analyze the consequences of a leader's actions and determine any needed adjustment in behavior.
 2. Identify behaviors modeled by a leader that may positively or adversely influence the performance of others.
- D. Knowledge of receiving and providing adequate and timely feedback for monitoring the progress and work of self and others
1. Identify systematic evaluation techniques to assess performance of self and others.
 2. Identify critical or significant events that provide information for improving performance of self and others.
 3. Identify the evidence required to assess attainment of goals.
 4. Identify examples of effective coaching and/or mentoring.
- E. Knowledge of purposes and methods of delegation
1. Identify purposes of delegation.
 2. Distinguish between appropriate and inappropriate methods of delegation.

PERSONNEL (HUMAN RESOURCES)

- A. Knowledge of the role of the administrator in recruiting, selecting, and inducting instructional and noninstructional personnel
1. Identify responsibilities of administrators in recruiting, selecting, and inducting personnel.
 2. Identify job-related criteria and violations in the selection process.
 3. Identify components of an effective interview.
 4. Identify strategies that involve staff members in the selection process.
 5. Identify legitimate sources of information about prospective candidates.
 6. Identify district and school-site orientation and socialization activities.
- B. Knowledge of the organization and use of information on school personnel
1. Identify policy and procedure for placing, maintaining, and accessing confidential and nonconfidential information on school personnel.
 2. Identify Florida laws governing Florida school personnel files and records.
- C. Knowledge of career and staff development theory and practice
1. Identify resources, approaches, and techniques for career and staff development programs based on individual and group needs.

2. Identify advantages and characteristics of effective career and staff development programs.
- D. Knowledge of appraisal processes and procedures
1. Distinguish between reliable and unreliable performance appraisal criteria, methods, techniques, and resources.
 2. Distinguish between school-site and district-level performance appraisal responsibilities.
 3. Identify diagnostic, prescriptive, and remediation resources and methods to facilitate employee growth.
- E. Knowledge of processes and procedures for discipline, dismissal, and nonrenewal of school employees
1. Identify the administrator's responsibilities in employee discipline, dismissal, and nonrenewal.
 2. Identify elements of due process involving discipline, dismissal, and nonrenewal of school employees.
 3. Distinguish grounds for just cause involving dismissal.
- F. Knowledge of the collective bargaining process and management of collective bargaining agreements
1. Identify the state agency and state laws that regulate the collective bargaining process in Florida.
 2. Identify the role of the administrator in managing collective bargaining agreements.
 3. Identify negotiation and grievance procedures in the collective bargaining process.
- G. Knowledge of incentives for attracting and retaining personnel
1. Identify the relationship between reward and motivation.
 2. Identify types of intrinsic and extrinsic benefits.

APPENDIX J

FLORIDA PRINCIPAL COMPETENCIES: SCHOOL OPERATIONS

(FLORIDA DEPARTMENT OF EDUCATION, 2002)

SCHOOL OPERATIONS

Curriculum

Finance

Law

Technology

CURRICULUM

A. Knowledge of needs assessment and planning

1. Identify procedures and appropriate uses of technology for conducting a systematic assessment of school needs.
2. Identify procedures and appropriate uses of technology in curriculum planning.
3. Determine discrepancies between existing and desired curriculum and instruction.
4. Identify the influence of equity and diversity issues on needs assessment and planning.
5. Identify clear goals and objectives to establish an action plan for implementation.

B. Knowledge of effective teaching and learning

1. Identify research on effective teaching and learning methodology.
2. Identify theories of learning and their application in classroom practice.
3. Identify principles and practices for building a community of learners and for creating a climate for lifelong learning.
4. Identify practices in teacher planning, instructional organization, and classroom management that enhance student learning and achievement.
5. Identify instructional delivery methods that enhance student learning and achievement.

6. Select appropriate technology to enhance teaching and learning.

C. Knowledge of the principles of curriculum selection and development

1. Select data sources based on needs assessment and planning for development of curriculum.
2. Identify school goals and objectives based on learner and community needs.
3. Identify functions and implications of various curriculum designs.
4. Select appropriate curriculum approaches based on human growth and development principles and the individual learner.

D. Knowledge of resources to achieve curricular and instructional goals

1. Select strategies for identifying and acquiring materials, facilities, transportation, and technological and human resources available for supporting school programs.
2. Identify appropriate processes for horizontal and vertical planning.
3. Identify and apply resources to reorganize content delivery.

E. Knowledge of the change process, curriculum implementation, and instructional innovation

1. Identify major innovations in curriculum and instruction.
2. Identify the elements required for the successful promotion of change in the school's curriculum and instructional program.
3. Identify appropriate professional development activities and exemplary instructional strategies for staff.
4. Select effective strategies for leading others through the process of continuous change in curriculum and instruction.
5. Identify the influence of diversity in meeting the needs of all segments of the

school population.

6. Identify effective strategies to communicate relevant information about curriculum to appropriate constituencies.

F. Knowledge of the methods and principles of assessment and evaluation

1. Identify appropriate principles and practices for program evaluation.

2. Identify appropriate principles and practices for staff evaluation.

3. Identify appropriate principles and practices for student evaluation.

4. Identify principles and practices in data collection, analysis, interpretation, and use.

5. Identify appropriate goals and measurable objectives for curriculum and instruction improvement.

6. Identify formative evaluation strategies for curriculum and instruction improvement.

FINANCE

A. Knowledge of Florida's funding plan for public elementary and secondary schools

1. Identify the major funding components of the total state school finance program.

2. Identify, interpret, and apply each of the formula factors used in computing the state and local Florida Education Finance Program allocation.

3. Identify the requirements for school district participation in the Florida Education Finance Program.

4. Demonstrate knowledge of the adequacy and equity of the Florida Education Finance Program regarding children and taxpayers.

B. Ability to analyze the processes of planning, developing, implementing, and evaluating a district budget

1. Identify the major funds in a school district's budget.

2. Identify the major categories of financial resources available to a district beyond the state allocation.

3. Identify the interrelationship between the individual school budget and the school district budget.

4. Interpret and use the factors that cause change in the school operating budget.

5. Identify the purposes of a budget.

6. Demonstrate knowledge of the purposes of school internal funds and the proper accounting of those funds.

C. Knowledge and application of school finance concepts

1. Demonstrate knowledge of and make inferences concerning model school finance plans of other states.

2. Demonstrate knowledge of and discriminate between measures of school district fiscal capacity.

3. Identify measures of educational resource need.

4. Identify major sources and characteristics of taxation used to support public education.

5. Demonstrate knowledge of equity concepts tested in major school finance litigation.

6. Identify, interpret, classify, and make inferences concerning the contributions of

education to the economy.

D. Knowledge of the processes of financial accounting, auditing, and reporting

1. Identify methods of cost attribution.
2. Identify and discriminate between the practices, standards, and procedures of accounts used in school internal audits.
3. Discriminate between components of the accounting classification structure used by Florida school districts.
4. Identify and differentiate between practices and procedures of fiscal control and accountability of school-based funds.

E. Knowledge of the precedence and purposes for funding public elementary and secondary education

1. Identify federal, state, and local historical developments in public school funding.
2. Distinguish between federal, state, and local purposes in the funding of public schools.
3. Identify current trends of school finance in Florida.

LAW

A. Knowledge of federal constitutional provisions that apply to the public education system

1. Identify judicially recognized rights and responsibilities guaranteed under the First Amendment.
2. Identify judicially recognized rights and responsibilities guaranteed under the Fourth Amendment.
3. Identify judicially recognized rights and responsibilities guaranteed under the Fourteenth Amendment.

B. Knowledge of federal statutory and regulatory provisions that influence public education

1. Identify legal interpretations of the purpose and intent of federal statutes prohibiting all forms of discrimination in public schools.
2. Identify exceptional education entitlements and related rights under federal statutes.
3. Identify employee and student rights and responsibilities under federal statutes.

C. Knowledge of state constitutional, statutory, and regulatory provisions governing the Florida public school system

1. Identify the statutory powers and duties of the Florida Board of Education, Secretary of Education, local school boards, superintendents, and principals.
2. Identify standards and procedures of state administrative law, public disclosure, record keeping, and child welfare.
3. Identify standards and procedures applicable to state certification, selection, evaluation, discipline, dismissal, and nonrenewal of school district employees.
4. Identify standards and procedures applicable to state statutory provisions for accomplished practices, compulsory school attendance, sexual harassment, charter schools, alternative schools, safe schools, curricula, and facilities.
5. Identify legal standards and procedures applicable to school accountability legislation.

D. Knowledge of responsibilities under the State's standards for professional ethics

1. Identify responsibilities of educators to students.
2. Identify responsibilities of educators to parents.
3. Identify responsibilities of educators to the profession.
- E. Knowledge of tort and contract liability as related to the operation of Florida public schools
 1. Identify legal standards of negligent tort liability applicable to school employees and districts.
 2. Identify legal standards of intentional tort liability applicable to school employees and districts.
 3. Identify legal standards that are applicable to site administrators in negotiating contracts for goods and services.

TECHNOLOGY

- A. Knowledge of various computer hardware and related technologies appropriate to the management of a school
 1. Identify the major components of computer systems.
 2. Identify basic hardware components for implementing local area networks and for accessing remote electronic resources such as FIRM and the Internet.
 3. Identify criteria for evaluating computer hardware and related technologies appropriate to meet specific school management needs.
- B. Knowledge of various types of software for assisting in the management of a school
 1. Evaluate and select appropriate system and application software for automating specified school management tasks.
 2. Identify software for implementing local area networks and for accessing remote electronic resources such as FIRM and the Internet.
- C. Knowledge of various computer hardware and related technologies appropriate to the instructional program of a school
 1. Identify the appropriate computer hardware and related technologies required for instruction.
 2. Identify appropriate criteria for evaluating computer hardware and related technologies for specified instructional purposes.
- D. Knowledge of various types of computer software and related technologies for supporting the instructional program of a school
 1. Identify appropriate uses of software in the design and delivery of instruction.
 2. Identify uses of technology in the placement of students and assessment of their progress.
 3. Identify uses of integrated learning systems.
 4. Identify appropriate criteria for evaluating and selecting software to achieve instructional goals.
- E. Knowledge of management policies for the appropriate use of technological resources to serve the mission of the school
 1. Identify the legal and ethical issues and practices involved with the use of software.
 2. Identify appropriate software and procedural safeguards necessary to secure and limit access to data stored on computer media.

3. Identify practices for development and support of the technological resources of a school.
4. Identify practices for development and support of the human resources of a school.
- F. Knowledge of common computer and related technological applications
 1. Identify basic word processing concepts.
 2. Identify basic spreadsheet concepts.
 3. Identify basic database management concepts.
 4. Identify basic telecommunications concepts.
 5. Identify basic presentation software concepts.
 6. Identify basic multimedia and hypermedia concepts.

APPENDIX K

PARTICIPANT BIOGRAPHY

Full Name:

Place of Birth:

Education:

<u>School</u>	<u>Degree</u>	<u>Region</u>	<u>Graduation Date</u>
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Personal Profile

Five to seven high impact statements that describe you. These are effectively your personal strengths. Use descriptive adjectives.

Achievements

High impact descriptions of your major achievements.

Career History

Compact summary of your career history starting with the most recent or present job. Use a generally recognized job title if the actual job title is misleading or unclear.

Brief Memoir

Think about what you would like someone to know about you and what parts of your life you want to people to know the most about. Use descriptive adjectives.

Prompts:

What are the adjectives you would use to describe yourself?

What events shaped or changed your life?

Did you overcome obstacles? Take risks?

To determine the reasons behind the challenges of securing participants in this study and better plan for subsequent studies, the researcher asked the individuals who voluntarily participated the following questions:

Why did you choose to participate in this study?

Why do you think other principals did not choose to participate?

APPENDIX L

CONSTRUCT ELICIATION SCRIPT

Full Context Elicitation:

Place all element cards in front of the participant. The Repertory Grid test is a structured conversation, a structure representing psychological space (Kelly, 1955). It is not up to the researcher to judge but to listen skillfully (Stewart, 2005).

Initial Instructions for triadic analysis, a method developed by Kelly (1955) to elicit constructs:

“Please take a moment to consider these elements. Now think of an important way in which two of these elements are similar to one another, but different from a third. You can therefore think of a single word or short phrase that describes how two of these elements are similar to one another but different from a third. Once you have an idea in mind, move the two elements you think are similar onto the card on the right (emergent pole). Now move the element you think is different onto the card on the left (implicit pole). Now in what way are element 1 and element 2 similar to one another yet different from element 3?”

Ask for a single word or phrase to describe the two elements which are the most similar. Then ask for a single word or phrase to describe what it is these two elements have in common.

Then ask for a single word or phrase to describe the element that is most different on that dimension. In triadic analysis, the researcher should focus on the participants’ responses that indicate a clear contrast, appropriate detail, and a clear relationship to the topic (Fransella & Dalton, 2000). Kelly’s (1955) principle in triadic analysis for personal construct elicitation: People do not define good without a corresponding definition of evil.

Laddering:

Laddering is the process developed by Kelly (1955) where the researcher attempts to get closer to the person’s core values and preferences with questions such as, “Why is that an important distinction to make about the elements?” or “Which end of the pole do you prefer?”.

Once again, the participant is asked to describe the similarities and differences using a single word or short phrase. Kelly (p. 138) defined the emergent pole as that which embraces most of the immediately perceived context and the implicit pole as one which contrasts with the emergent pole.

Triadic Analysis:

When the triadic analysis method is used, the maximum number of constructs will be less than or equal to 3. Constructs are not duplicated; if both poles of two constructs match, the participant is asked to think of a different construct.

Feedback:

Stewart (2005) suggested that the researcher be alert for the best times to give and receive feedback. The researcher may want to stop at times and summarize what has been learned so far and then decide where to go next in the conversation.

Rationale in using triadic analysis in this study:

The elements give adequate coverage of the domain the study is designed to explore; what are the transparent templates principals create and attempt to fit over the realities of which their world is composed? The elements are concrete and specific. The principals were provided with Florida definition of principal competencies in their entirety prior to the initial personal construct interview to encourage review and reflection.

APPENDIX M

SECOND INTERVIEW CONFIRMATION EMAIL

From: Mary Chang
Sent: Wednesday, June 01, 2005 12:46 PM
To: Principal
Subject: District Approved Principal Study-Thank you!

Thank you for meeting with me this morning. I sincerely appreciate your time and effort in completing our first interview. I am also writing to confirm that we will be meeting on Wednesday, July 13, 2005 at 9:00 a.m. for a brief second interview that will last approximately fifteen minutes. Please contact me at xxxxxxxxxxxxxx or call me at xxx-xxx-xxxx if you have questions or concerns.

Mary

APPENDIX N

REPERTORY GRID TEST

emergent	Curriculum	Finance	Law	Technology	Leadership	Management	Personnel	Communication	implicit
Communicative									Secretive
Democratic									Autocratic
Student Oriented									Content Oriented
Adaptive									Rigid
Vision									Myopic
Delegate									Workaholic
Passion									Apathy
Challenging									Easy
School Based									Downtown Based
Seamless									Choppy
Spiritual									Secular
Multifaceted									Simple
Inclusive									Exclusive
Built									Mandated
Cooperative									Hindersome
Resourceful									Unimaginative
Empower									Weaken
Time Autonomy									Time Constraints
Fun									Boring
Potential									Actualized
Persistence									Lack of Persistence
Change									Status Quo

APPENDIX O

REPERTORY GRID TEST SCRIPT

Classic Repertory Grid Test:

The participant is asked to rate each element on each of the bipolar constructs elicited on two grids: self and ideal self. The participant rates each element on each of the constructs using an 8-point bipolar rating scale ranging from +3 to -3. All *does not apply* responses or constructs without responses will be replaced with 0 (Kelly, 1955, p. 271-272). Otherwise, missing values could result in the deletion of a large number of constructs from several analyses conducted using Idiogrid software (Grice, 2002). Idiogrid software assumes that high scores on the rating scale correspond with the emergent pole of the constructs and low scores correspond with the implicit poles.

Self-characterization:

“Examine the scale below that ranges from Emergent Constructs to Implicit Constructs. Notice also that you are asked to rate each element according to the set of constructs on the scale to represent what you think about each element in terms of your leadership behavior. For example, “Being communicative is very desirable to what governs my leadership behavior in relation to curriculum.” Mark a 3 in the box under curriculum, next to perceptive.

Your options for rating range from:

- +3 Very Desirable
- +2 Desirable
- +1 Fairly Desirable
- 0 Does not apply
- 1 Less Desirable
- 2 Not Desirable
- 3 Strongly Not Desirable

Once you have made your rating, move on to the next set of constructs until you rate all pairs of constructs relative to each element.”

APPENDIX P

THANK YOU LETTER

December 13, 2005

XXXXXXXX School
Principal M9H2
XXX School Street
School City, FL XXXXX

Dear Principal M9H2,

Thank you for your voluntarily participation in my dissertation study that sought to go beyond the externally imposed descriptions of the leadership behavior of principals, exploring their personal constructs to discover the transparent templates principals create and attempt to fit over the realities of which their world is composed.

Enclosed please find your individual analysis provided to you in appreciation of your participation. Your involvement greatly enriched the results of this study.

Sincerely,

Mary Chang

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